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Special Programs

U. S. DEPT. OF AGRICULTURE
NATIONAL INFORMATION SERVICE

DOE 17 1967



CURRENT SPECIAL PROGRAMS

- **Computers**
- **Management**
- **Modern Learning Center and Communications**

GRADUATE SCHOOL

U.S. Department of Agriculture
Washington, D. C. 20250

1967-1968

Special Programs To Meet Federal Agency Needs

UNITED STATES DEPARTMENT OF AGRICULTURE

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GRADUATE SCHOOL

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SPECIAL PROGRAMS DEPARTMENT

THE GRADUATE SCHOOL

Institutes, Workshops, Seminars, and Special Courses
designed to supplement in-service training programs of Federal agencies

THE GRADUATE SCHOOL

The objective of the Graduate School of the United States Department of Agriculture has always been to provide needed educational opportunities for Federal employees. The Graduate School has six main programs: resident evening, special, correspondence, international, public lectures, and the press. Graduate study is a primary interest of the School, but it also offers a large number of undergraduate as well as non-credit courses. All courses are open to qualified employees of the Federal Government and to other qualified persons as facilities permit.

The Graduate School does not grant degrees and has never sought that authority. It prefers to give courses of standard graduate and undergraduate quality, to assure that quality through the competence of its instructors, and to cooperate with the degree-granting institutions.

The United States Civil Service Commission accepts the credits of the Graduate School, for examination and qualification purposes, on the same basis as those from accredited colleges and universities.

The government of the Graduate School is vested in a General Administration Board appointed by the Secretary of Agriculture. The functions of this Board are similar to those of a board of trustees of a college or university. The School is administered by a director and a small administrative staff. It is nonprofit and receives no Federal funds.

SPECIAL PROGRAMS

The day-time courses of the Special Programs Department are primarily designed to meet the needs of Federal agencies.

The staff of this Department includes training and development specialists whose primary responsibilities are to respond to agency requests. They are available to give advice and develop ideas to help the agency meet its training and development requirements.

Special programs take various forms—seminars, institutes, workshops, and traditional college-type courses. Some are all-day sessions ranging from one day to eighteen weeks; others meet an hour or two once or twice a week for several months. Regular credit courses are also presented during working hours when such courses will more appropriately assist in filling the training needs of the agency.

Classes are held in the Federal Triangle area and in the vicinity of the Graduate School offices in the U.S. Department of Agriculture's South Building. Some intensive seminars are held out of town in such places as Williamsburg, Virginia. Upon request, classes are taken to the building in which the agency sponsoring the course is located.

Special programs are offered on two bases:

Public programs:

Regularly scheduled courses open to all qualified government personnel and announced in this bulletin.

In-Agency programs:

Specially designed courses in consultation with the agency to fit the unique requirements of a particular agency. The Graduate School staff will be happy to assist any agency to meet special training needs.

Overall guidance for all Special Programs courses is provided by the Special Programs Committee, listed on page iv. Other committees include the ADP and Management Sciences Committee, listed on the green divider; the Public Administration, General Management and Supervision Committee and the Critical Issues and Decisions Committee, listed on the tan divider; and the Center for Modern Learning Technology Committee, listed on the blue divider.

PROFESSIONAL STAFF

PROFESSIONAL STAFF

EDMUND N. FULKER, *Assistant Director and Head of Special Programs Department*

DR. J. FRANK KENDRICK, *Associate Head of Special Programs and Manager of Training in Computer Sciences*

DEE W. HENDERSON, *Program Specialist and Supervisor of Modern Learning Center*

D. E. RICHARD, *Program Specialist*

WOODROW H. SEARS, JR., *Program Specialist*

C. PAUL BARLOW, *Instructor/Coordinator*

LOREEN DEMETRO, *Instructor/Coordinator*

LUELLA DEVER, *Administrative Assistant*

SPECIAL PROGRAMS COMMITTEE

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ERWIN R. DRAHEIM, *Office of Personnel, Department of Agriculture*

JOHN W. GODBOLD, *Federal Aviation Agency*

FRANCIS J. MULHERN, *Agricultural Research Service, Department of Agriculture*

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ROBERT PHILLEO, *National Institutes of Health, Department of Health, Education and Welfare*

O. GLENN STAHL, *Civil Service Commission*

WILLIS UNDERWOOD, *Veterans Administration*

JOHN P. WALSH, *Department of Labor*

JOHN WILL, *Department of Commerce*

POLICIES AND PROCEDURES

Nominees should meet the qualifications indicated for each course. Exceptions may be made if a strong need for training exists and if it would be advantageous to the agency. Address inquiries to the designated members of the Graduate School staff.

Nominations should be submitted by the due date, which is usually four to six weeks before the start of the course. (See dates given for each course.) They may be submitted on agency letterhead using the nomination form format given on the inside back cover page of this bulletin. Nominations should be signed by an agency official, a training officer, or other person so designated, who has responsibility for approving and submitting nominations to the Graduate School.

Individuals without a sponsoring agency may use the nomination form format to apply for any course.

Acceptances will be sent out the week after the nomination due date informing both the agency and the nominee and giving instructions as to where to report for the first session.

Course Fee includes tuition, books, and materials. Course fees are payable in advance; a contract, purchase order, or billing instructions accompanying the nomination will be accepted as advance payment.

Individuals without a sponsoring agency may use the nomination form with a check for the full amount of the fee. Checks should be made out to the Graduate School, USDA.

Cancellations will be accepted without charge if received in writing two weeks or more before the start of the course, unless otherwise stated in the course description. After the cancellation deadline, the entire course fee is payable. Substitutions may be made at the discretion of the school.

INSTRUCTORS

The faculty of the Graduate School is recruited mainly from scholars employed in the Federal Service. Most faculty members have taught in high schools, colleges, and universities before joining the Federal Government. Because their positions in the Federal Government relate closely to the subjects they teach in the Graduate School, they bring a fresh academic point of view and a practical approach to the classroom.

Highly qualified individuals who are interested in teaching courses during the day should contact members of the Special Programs Professional Staff.

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Curriculum of Computer Sciences

General Information

The purpose of the Curriculum of Computer Sciences described in this bulletin is to provide special training for Federal employees and others to meet the particular needs of individual offices, agencies, or Departments in data processing.

Academic credit is given the student for each course satisfactorily completed.

Grades. At the close of the course, the student receives written notice by mail of the grade he has received. The following letter grades are used:

A	Excellent	F	Failure
B	Good	Aud.	Auditor
C	Fair	Inc.	Incomplete
D	Passable	W	Withdrawn

Transcript of Record. An information record or transcript may be obtained according to the policy of the Graduate School as outlined in the catalog of the Evening Program.

For further information on Computer Sciences courses, call Dr. J. Frank Kendrick, Manager of Training in Computer Sciences, on Code 111 (DU8-) 3247.

ADP and Management Sciences Committee

CHARLES F. KIEFER (Chairman), Civil Aeronautics Board

GARY D. BEARDEN, Department of Agriculture

HILDA CALLOWAY, Atomic Energy Commission

KEITH D. CARTER, Post Office Department

JOSEPH CUNNINGHAM, Bureau of the Budget

EDMUND DWYER, General Services Administration

EZRA GLASER, National Institutes of Health

WALTER HAHN, Environmental Science Services Administration

JOSEPH HASPRAY, Department of Agriculture

W. HENRY HILL, Department of the Navy

HOWARD W. HJORT, Department of Agriculture

NORMAN REAM, Department of the Navy

B. RALPH STAUBER, Department of Agriculture

BASIC CONCEPTS OF DATA PROCESSING

Course D4-105

3 credits

A series of ten seminars to give an overall prospective of data processing and its basic principles.

DESCRIPTION

This course is designed to introduce data processing to the person unacquainted with the field. Course material will cover subjects necessary to converse with systems analysts and programmers or to understand terminology used in computer programming and other data processing courses.

OBJECTIVES

At the conclusion of this course, the participant will be able to:

1. Satisfactorily enroll in further courses in data processing, for example—computer programming, COBOL, FORTRAN IV;
2. Understand the language used in the literature on data processing; and
3. Converse knowledgeably with persons working in the field of data processing concerning data processing applications.

SCHEDULE

Section I. Classes meet Saturday mornings 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 25 students. Participants should have a strong interest in automatic data processing. They should expect to work directly in the ADP field or continue training in programming. The participants should have completed a course in algebra, accounting, or a similar course.

COURSE FEE

\$60.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

PUNCH CARD DATA PROCESSING

Course D3-111

3 credits

A series of ten seminar and workshop sessions pertaining to Punch Card Data Processing Systems.

DESCRIPTION

The purpose of this course is to provide a balanced introduction to punch card data processing systems, how they work, and how they can be used. It is concerned with systems as well as machine applications. Workshops will offer individual and group participation in exercises and problems, and will include actual "hands-on" experience in the operation and wiring of accounting machines. Punch card computers will be discussed and their use explored. Punch card equipment will be stressed primarily as these machines will be commonly used in small, medium and even large installations for several years, and as knowledge of such equipment will prove effective and useful as transitions are made to more advanced data processing equipment.

OBJECTIVES

Upon completion of this course, participants will have:

1. A knowledge of punch card data processing systems, using EAM and computer equipment;
2. A working familiarity with the most commonly used basic accounting machines and some computers—what they can do and cannot do, and their basic principles of operation; and
3. An understanding of elementary operating instructions for electric accounting machines in relation to the major elements of systems.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should presently be serving in a position of responsibility related to data processing systems, or should be anticipating assignment to such a position. However, persons working directly with elements of data processing who need a general understanding of punch card data processing may also be included.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ADP ORIENTATION FOR SECRETARIES AND CLERKS

Course D3-112

3 credits

A series of ten seminar and workshop sessions designed specifically for secretaries and clerks.

DESCRIPTION

This is an orientation course to fill the specific needs of secretaries and clerks. With the implementation of more and more automated systems, secretaries and clerks are finding themselves getting involved in data processing. Included in the material that will be presented at the seminars are: an introduction and a survey of the various ADP equipment (computer, sorter, card-punch, etc.), fundamentals of data processing, the relationship of ADP to secretarial and clerical functions, ADP printouts, card-punch systems, magnetic tape systems, flow-charts, technical writing and documentation, assignment of secretarial and clerical personnel in ADP, basic ADP concepts, human relations in ADP, and generally what every secretary and clerk should know about ADP.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Interpret punched-card data;
2. Know how ADP equipment works;
3. Make a print lay-out;
4. Draw simple flow charts; and
5. Understand basic ADP concepts.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 30 students. Participants are limited to secretarial and clerical personnel who may or may not be directly engaged in ADP activities.

COURSE FEE

\$60.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

DATA PROCESSING (GENERAL)

Course D3-559

3 credits

A series of ten seminar and workshop sessions covering Data Processing.

DESCRIPTION

These seminars are intended to be an introductory survey of automatic data processing. Included in the seminars will be numbering and coding systems, logical organization and components of ADP hardware systems, ADP communications concepts, software systems concepts, system analysis, flow charting and programing, plus highlights of computer acquisition and management.

OBJECTIVES

1. To provide a complete basic understanding of ADP hardware and software;
2. To acquaint the participant with the concepts and vocabulary of ADP;
3. To provide an understanding of systems analysis, flow charting and programing; and
4. To serve as a broad basis for further oriented education in Automatic Data Processing.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed at least two years of undergraduate education or equivalent work experience.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

DATA PROCESSING IBM 360

Course D3-578

3 credits

A series of ten lectures, demonstrations, and workshops to introduce the student to the IBM 360 Data Processing System.

DESCRIPTION

This course is a description and evaluation of the IBM/360 Computer System. Data representation schemes; addressing schemes; input/output (devices, control, and application); instruction and command set logic; software operating systems, programing languages, sort-merge; installation and management considerations will be covered from both theoretical and practical view point. This is not a programing course.

OBJECTIVES

The objectives of this course are to:

1. Provide a complete basic understanding of the IBM/360 hardware and software;
2. Prepare students who intend to continue to complete mastery of the IBM/360 with the necessary prerequisites; and
3. Provide participants, who need evaluation criteria and appreciation of the IBM/360 with an in-depth consideration of this system.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed Basic Concepts of Data Processing, D4-105, or have experience in programing a stored digital computer.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

DATA PROCESSING UNIVAC 1107

Course D3-568

3 credits

A two-part course. A series of ten seminar and workshop sessions for each part on programing the UNIVAC 1107 computer.

DESCRIPTION

Part I—This part covers the 1107 hardware systems. Included in the sessions will be the basic hardware systems, organization of peripheral subsystems, instruction repertoire, index register modification, and indirect addressing. Actual experience will be provided in assembling and testing programs, concurrent processing and use of the Executive system.

Part II—All aspects of programing the UNIVAC 1107 large scale computer are covered, including EXEC Functions, scheduling, priority interrupt, communications, concurrent processing, input/output subroutines, SORT/MERGE, debugging aids, and librarian routines. Actual experience using these routines will be provided.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Write programs using Assembly Language, Input/Output Routines, Executive Functions and Communications;
2. Prepare parameter cards for SORT/MERGE and Librarian Subroutines;
3. Understand Multi-processing on large scale computer;
4. Debug programs that are not too complex; and
5. Prepare schedule cards for use by the Executive System.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Nominations Due:

Fall: Part I, September 30-December 9, 1967

September 1, 1967

Winter: Part II, January 6-March 9, 1968

December 15, 1967

QUALIFICATIONS

Participation is limited to 20 students. Programing experience, systems analysis, or computer environment are preferred.

COURSE FEE

Each part \$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

DATA PROCESSING UNIVAC 1108

Course D3-557

3 credits

A two-part course. Two series of ten seminar and workshop sessions covering the UNIVAC 1108 hardware and software systems.

DESCRIPTION

The course will be presented in two series of ten sessions each. Workshops will consist of individual and group participation on exercises and problem programs. Actual experience in assembling programs under the operating system will be gained.

Part I—The first series is designed to cover aspects of the UNIVAC 1108 hardware. Included in the sessions will be the basic hardware systems, the peripheral subsystems, the instruction repertoire, input/output philosophy and introduction to the Assembly processor.

Part II—The second series is designed to cover aspects of the UNIVAC 1108 software. Included in the sessions will be the Executive system, the FORTRAN processor, the COBOL processor, and an introduction to the various applications processors which are available.

OBJECTIVES

On completion of these courses, the participant will have:

1. A basic understanding of the 1108 hardware components and their interrelation within a hardware system;
2. A basic understanding of the assembler and compiler processors working under a multiprogramming executive system; and
3. Experience in programming for the UNIVAC 1108 computer.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: Part I, September 30-December 9, 1967

Winter: Part II, January 6-March 9, 1968

Nominations due:

September 1, 1967

December 15, 1967

QUALIFICATIONS

Participation is limited to 20 students. Participants should have taken at least one introductory course in computers or have the equivalent in work experience or anticipated assignment in a UNIVAC 1108 installation.

COURSE FEE

Each part \$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

DATA PROCESSING HONEYWELL 200

Course D3-573

3 credits

A series of ten classes in programing for the Honeywell 200 computer.

DESCRIPTION

A review of basic Automatic Data Processing Concepts. Introduction to Easycode Programming language, flow charting, data formats, introduction to H-200 Operating System.

OBJECTIVES

On completion of this course, the student will be able to:

1. Write programs in Easycode for the H-200; and
2. Have a basic understanding of the H-200 operating system.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed Basic Concepts of Data Processing, D4-105, or equivalent.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

DATA PROCESSING, SPECTRA 70

Course D3-583

3 credits

A series of ten seminar and workshop sessions covering electronic data processing using the RCA Spectra 70 computing systems.

DESCRIPTION

The course is designed to cover major aspects of the RCA Spectra 70 hardware, software and system usage. Included in the seminars are: Basic equipment, basic software, instruction complements, data manipulation, comparison and branching, address generation, sectioning and linking, I/O simultaneity, file definition, I/O macros and editing. Class problems illustrating programming instruction, operating systems, I/O control and data handling, etc. will be given. A project program will be designed, coded and assembled. Spectra 70 Operating Systems and computer room operations will be introduced. Student participation in computer room operations will include: Console operation, tape handling and punch card handling.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Write Spectra 70/35-45-55 programs (using the Assembly System and the Tape Operating System) that process general purpose instructions;
2. Control the Spectra 70/35-45-55 computer systems while executing basic operations; and
3. Assist other individuals in their organizations in the preparation of user programs.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have Basic Concepts of Data Processing, D4-105, or equivalent.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

DATA PROCESSING CDC 3000 SERIES

Course D3-518

3 credits

A two-part course. Each part consists of ten seminar and workshop sessions on programing the CDC 3000 series.

DESCRIPTION

Subject matter: introduction to hardware, job processing, general information, instruction list to include, loading, storage shifts, searches, compare, arithmetic, BCD operations, interrupts, input/output, typewriter, addressing, auto load, and problem solutions.

OBJECTIVES

To train programmer to:

1. Write, time, and debug programs on a 3000 series computer;
2. Prepare control cards and job cards to run and effectively use system; and
3. Assist other programers at their installations, if necessary.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: Part I, September 30-December 9, 1967

Winter: Part II, January 6-March 9, 1967

Nominations due:

September 1, 1967

December 15, 1967

QUALIFICATIONS

Participation limited to 20 students. Introduction to CDC Computers and 6 months experience or one year of programing experience on any other large scale computer.

COURSE FEE

Each part \$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

DATA PROCESSING CDC 6000 SERIES

Course D3-519

3 credits

A two-part course. Each part consists of ten seminar and workshop sessions on programing the CDC 6000 series.

DESCRIPTION

Subject matter: introduction to hardware, central memory language ASCENT, detailed analysis of timing and optimizing small loops to increase program speed, peripheral and control process language ASPER, I/O techniques and problems. Use of disk as I/O device, systems monitor and loader, overlays and segmented loading. One or two detailed problems will be written by students and submitted for run on 6000 series computer.

OBJECTIVES

To train programers to:

1. Write, time, and debug programs on a 6000 series computer;
2. Prepare control cards and job cards to run and make effective use of systems; and
3. Assist other programers at their installations, if necessary.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: Part I, September 30-December 9, 1967

Winter: Part II, January 6-March 9, 1968

Nominations due:

September 1, 1967

December 15, 1967

QUALIFICATIONS

Participation limited to 20 students. Introduction to CDC Computers and 6 months experience or one year of programing experience on any other large scale computer.

COURSE FEE

Each part \$120.00 payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

DATA PROCESSING BURROUGHS B5500/6500 SYSTEMS

Course D3-543

3 credits

A series of ten seminars for ADP personnel to acquaint them with the Burroughs B5500/6500 Systems.

DESCRIPTION

This course is designed to acquaint the individual with the highly advanced information processing systems, the Burroughs B5500/6500 Systems. Covers the design concepts and software of the Systems.

OBJECTIVES

To introduce the individual to:

1. Automatic control through a full-scale operating systems, (MCP-Master Control Program);
2. Multiprocessing of independent programs, with dynamic scheduling by the operating system;
3. Modularity, for expansion without reprograming;
4. Efficient, effective use of problem oriented languages; and
5. Hands-on experience.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Training in basic concepts of data processing and programing experience desirable.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ADVANCE SYSTEMS DESIGN FOR BURROUGHS B300/B5500

Course D3-544

3 credits

A specialized systems course of ten sessions that deal with the design of total systems based upon third generation computer concepts of remote real time updating in a multiprocessing environment.

DESCRIPTION

Modern hardware design has made real time processing from remote stations both practical and desirable. The course is designed to cover the organization and control of data along with program structure and operating systems design in conjunction with multiprocessing environments.

OBJECTIVES

Provide the information to:

1. Acquaint the individual with the problems of large complex hardware organizations as they relate to real time production;
2. Familiarize the individual with exception reporting/updating and the various techniques employed;
3. Introduce remote compile/debug languages and systems techniques;
4. Present problems and solutions to concepts of virtual or unlimited memory in a multiprocessing environment; and
5. Hands-on demonstrations of complex environments of Burroughs B300 and B5500 Systems.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation limited to 20 students. Experience in systems analysis or programing systems with tape or disk computer systems.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

PROGRAMING AND SYSTEM CONCEPTS FOR BURROUGHS B100/200/300

Course D3-556

3 credits

A specialized ten-session programing and systems course for medium size computers.

DESCRIPTION

A study of components, operation logic, command structure, and software for small to medium size data processing systems with emphasis on multiprocessing, COBOL compiling, disk file concepts, data transmission, and operating systems.

OBJECTIVES

Opportunity for practice programing is provided—including laboratory sessions on the Burroughs B300 computer for "Debugging" of students' programs.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Completion of Basic Concepts in Data Processing, D4-105, or equivalent, and programing experience desirable.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

DISK/TAPE OPERATING SYSTEM (BOS/DOS/TOS) IBM 360

Course D3-303

3 credits

A series of ten seminar and workshop sessions covering the Basic, Disk, and Tape Operating Systems for the IBM/360.

DESCRIPTION

This course is designed to cover all aspects of the Basic, Disk, and Tape Operating Systems. The seminars will include the concepts of each system. The detailed operation of Job Control and usage of the Job Control language will be covered in lectures as well as demonstrated in the workshops. The details of Data Management (known as IOCS in previous systems) and operators Communication will be taught and demonstrated. The Service programs such as Link/Edit, Librarian, Sort/Merge, Auto test and Utilities will be covered in detail. The processing programs such as Assembler, FORTRAN, COBOL, PL/1, and RPG cannot be presented in detail in the time allotted, however, the Job Control language necessary to use them will be covered and demonstrated. The external specifications of the three systems are so similar that all demonstrations and student exercises will be performed using BOS.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Write the necessary Job Control language to execute any of the processing programs under BOS, DOS or TOS;
2. Use the utility programs to perform any of the utility functions;
3. Understand the error messages and interpret the output received from BOS, TOS and DOS; and
4. Assist other individuals in their organizations in using BOS, TOS, DOS.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a knowledge of the concepts of System/360. Experience with System/360 Assembly language or a higher level language is desirable. Experience with a programing system or monitor on a previous system is desirable.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

OPERATING SYSTEM (OS) IBM 360

Course D3-321

3 credits

This course is a series of ten seminar and workshop sessions covering IBM Operating System/360.

DESCRIPTION

This course is designed to cover the concepts and facilities of Operating System/360. The seminars will include detailed descriptions of the Control Program, Data Management, Job Control Language and Utilities with practical application of these subjects. Computer workshops will be provided to demonstrate the facilities discussed in the seminars as well as system operation and operator communication. The language translators such as FORTRAN, COBOL, PL/1 and Assembler will not be presented in detail, but their use under the Operating System will be covered. The multiprogramming facilities of the Operating System will also be discussed in detail.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Understand the concept and operation of the Operating System;
2. Utilize the facilities through the Job Control Language and utilities of the System;
3. Understand and interpret the output of the Operating System; and
4. Assist other individuals in the use of Operating System/360.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a knowledge of the concepts of System/360. Experience with System/360 Assembly Language or a higher level language is desirable. Experience with a programing system or monitor on a previous system is also desirable.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

OPERATOR'S TRAINING IBM 360/30

Course D3-304

2 credits

This course is a series of eight seminar and workshop sessions covering the operation of the 360 Model 30 in 1401 compatibility mode.

DESCRIPTION

This course is designed to cover all aspects of operating the 360 Model 30 in 1401 compatibility mode. Included in the seminars will be the hexadecimal numbering system, loading of programs, displaying characters, altering core storage, address stopping, setting sense switches, assigning tape units, taking a core dump, and operation of the 2540 card reader, 1403-N1 printer, 2400 tape units (with instructions for manual operations through the control unit) and the 2030 CPU. Practical uses of the CID will be explained with instructions on how to set switches, assign tapes and use the deck for special debugging problems. Workshops will consist of individual and group participation both in class and during the hands on time. There will be problem programs to run on the computer involving everything learned in class.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Operate the 360/30 as a 1401;
2. Assist programers in testing and debugging; and
3. Assist other operations personnel in operating the 360/30.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-November 18, 1967

Winter: January 6-February 24, 1968

Spring: March 23-May 11, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Operating experience on the 1401 or 1460 IBM Systems is very helpful but not necessarily a prerequisite.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

COBOL PROGRAMING

Course D3-595

3 credits

A series of ten lectures, workshops and computer laboratory sessions leading to proficiency in COBOL programing.

DESCRIPTION

This is a practical course of Common Business Oriented Programing Language (COBOL). The concept of compilers, identification, environment, data division, procedure division, problem definition, flow charting, coding, desk checking, test data preparation, compilation, testing, debugging, and documentation will be learned.

Workshop and laboratory sessions will use the IBM/360 and the operating system and COBOL compiler to solve practical, realistic programing problems. Actual experience in coding, compiling, and testing individual and group problems will be provided in the laboratory sessions.

OBJECTIVES

Upon successful completion of the course the participants will be prepared to:

1. Efficiently use COBOL to solve problems of reasonable complexity, and have the skills to develop complete proficiency in COBOL with additional practice;
2. Use the IBM/360 operating system efficiently with COBOL; and
3. Know the advantages and disadvantages of COBOL and when and where this language should be used in ADP situations.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed Basic Concepts of Data Processing, D4-105, or equivalent.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

FORTTRAN IV PROGRAMING

Course D3-589

3 credits

A series of ten seminar and workshop sessions covering the FORTRAN IV programing language.

DESCRIPTION

This course is designed to cover all aspects of the FORTRAN IV programing language. Included in the seminars will be basic components, flow of control, floating point arithmetic, constants, variables, arithmetic expressions, looping instructions, input/output instructions, format statements, subroutines, and job control language. Workshops will consist of individual and group participation on exercises and problem programs. Actual experience in compiling and testing of programs will be provided. This course is oriented towards the IBM 360 Systems, however, approximately 95 percent of the material covered is applicable to other computers.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Write programs of reasonable complexity using the FORTRAN IV programing language;
2. Prepare job control cards required for compilation, testing, and operation; and
3. Assist other individuals in their organizations in using the FORTRAN IV language.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a minimum of two years college mathematics and/or statistics or have direct experience or anticipated assignment in a large data processing installation.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ALGOL PROGRAMING

Course D3-524

3 credits

A full ten-session course of instruction in ALGOL programing designed to meet the needs of individuals who may need to use the extensive ACM ALGOL Libraries.

DESCRIPTION

The course is designed to provide the student with complete understanding of the ALGOL language as defined by and used in ACM publications to document problem solution. The "natural" 1/10 extensions to ALGOL 60 which can be used to address bulk storage files, remote units, and local 1/0 equipment are included to give the student a more practical ALGOL capability.

OBJECTIVES

The course is designed to:

1. Equip the individual with a background in ALGOL languages;
2. Provide the student with a procedure oriented solution to problems;
3. Provide the student a command of the many published ALGOL solutions and relate them to any programing language; and
4. Permit hands-on experience in ALGOL programing, testing, and debugging on the Burroughs B5500.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Completion of Basic Concepts of Data Processing, D4-105, or its equivalent is highly desirable. Algebra, Geometry and program experience are also desirable.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

REPORT PROGRAM GENERATOR (RPG) IBM 360

Course D3-521

3 credits

A series of ten seminars and workshops covering report generator programming.

DESCRIPTION

Designed for personnel, with limited programming experience, to write RPG programs for the IBM/360. This course will be especially profitable to data processing supervisors who wish to evaluate a problem-oriented language designed to provide users with an efficient, easy-to-write technique for generating programs.

Participants are involved in analyzing, coding, testing and debugging RPG programs on the IBM/360.

OBJECTIVES

Upon successful completion of the course, the student will be able to:

1. Produce a spacing chart for any output file to be generated;
2. Code the specification sheets that describe the input records, the data fields used, the calculations required for the report, and the output format specified;
3. Select the coding approach which will result in the fewest number of generated program instructions; and
4. Code the control cards necessary for the operating system.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have had Basic Concepts of Data Processing, D4-105, or equivalent work experience.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

PROGRAMING LANGUAGE/ONE PL/I IBM 360

Course D3-522

3 credits

A series of ten lectures combined with computer workshop sessions leading to proficiency in the PL/I programing language.

DESCRIPTION

This course is a practical user-oriented approach to PL/1. The language is defined and explained in detail. Subjects covered include: Program definition, assignment statements, control statements, list and data directed input/output, groups and arrays, structures, edit direct input/output, stream input/output, report writing, built in functions, asynchronous processing, and compile time facilities.

Workshop will consist of defining and solving realistic programing problems. Actual experience coding, compiling and testing individual group problems, using the IBM 360 compiler and computer will be provided.

OBJECTIVES

Upon successful completion of this course the participant should be able to:

1. Use PL/1 to solve data processing problems of reasonable complexity and with additional practice will be completely proficient in PL/1;
2. Have adequate proficiency with operating System 360 to use this system in conjunction with PL/1;
3. Know the advantages and disadvantages of the language and be able to advise and make decisions concerning the use of PL/1 in ADP work situations; and
4. Assist others in the use and application of PL/1.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed Data Processing IBM 360, D3-578. COBOL, FORTRAN or ALC coding are recommending or equivalent experience in data processing on large scale computer.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ASSEMBLER LANGUAGE CODING (ALC) IBM 360

Course D3-523

3 credits

A series of ten lectures, workshops, and computer laboratory sessions in the practical use of IBM/360 Assembly Language.

DESCRIPTION

This course will give the student knowledge of the complete assembly language coding instruction set, and the set's use and application to typical data processing problems, both administrative and scientific. General input/output techniques will be discussed and one data set organization input/output method will be used to complete full programming capability. Actual problem definition, flow charting, coding, testing, and debugging with the computer are included.

Workshop sessions with practical participant-selected problems being defined, flow-charted, and coded in assembly language will be brought to fruition by laboratory sessions using the IBM/360 computer to assemble and test these programs.

OBJECTIVES

Successful completion of this course will enable the participant to:

1. Be able to efficiently use ALC to solve the normal complexity programming problems required in ADP installations;
2. Successfully use the facilities of the IBM/360 operating system to assemble, test, and execute ALC programs; and
3. Have all basic knowledge and skills which the participant needs to become an accomplished ALC programmer with additional work situation practice.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Data Processing System/360 or equivalent experience programming stored program computers in assembler language is a prerequisite of enrollment.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ADP SYSTEMS ANALYSIS AND DESIGN

Course D3-759

3 credits

A series of ten seminars on systems analysis and design.

DESCRIPTION

This course is designed to cover the basic principles and problems in systems analysis and design, and to acquaint the student with the systems approach to ADP. Examples of various systems will be presented.

OBJECTIVES

On completion of this course, the participant will be able to accomplish the following:

1. Participate in a feasibility study;
2. Participate in a systems analysis;
3. Participate in a systems design; and
4. Prepare documentation for systems work.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have at least six months of programing experience.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ADP SYSTEMS DESIGN WORKSHOP

Course D3-719

3 credits

A series of ten workshops in Systems Analysis and Design for ADP.

DESCRIPTION

The participants in the workshop will, under the guidance of the instructor, conduct a systems analysis and design. The participants will be provided with a description of the "operation" to be analyzed. All materials will be provided for the analysis and design. By the end of the workshop, each participant will have prepared a complete systems documentation for the project.

OBJECTIVES

On completion of this workshop, the participants will be able to:

1. Have a better understanding of the problems involved in systems analysis and design;
2. Have acquired some new solutions for their own problems; and
3. Assist others in performing better analyses and designs.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a background in programing and at least six months experience as computer systems analyst, or ADP Systems Analysis and Design course, D3-759, or equivalent.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

SOURCE DATA AUTOMATION

Course D3-603

3 credits

A series of ten seminar and workshop sessions covering Source Data Automation.

DESCRIPTION

This course is designed to survey all aspects of Source Data Automation. Included in the seminars will be systems design for effective utilization, program design for realistic data quality control, operator training, post installation review and evaluation, and equipment selection. The course emphasis will be placed on capturing source data with a minimum of disturbance to an otherwise optimum data processing system.

OBJECTIVES

On completion of this course the participant will be able to:

1. Recognize potential application of source document automation;
2. Participate in the design of an effective SDA system;
3. Outline the programmed edit check procedures required for data acquired through SDA; and
4. Establish proper training procedures for operators of the SDA hardware.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have formal education or practical experience in the field of ADP. An understanding of basic ADP systems and programing concepts is assumed.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ADP INFORMATION RETRIEVAL

Course D3-635

3 credits

A series of ten seminars on the fundamentals of information storage and retrieval for ADP.

DESCRIPTION

This course is designed to cover the fundamentals of documentation, abstracting, indexing, coding, storage, retrieval, and vocabulary control. Examples of operating storage and retrieval systems will be presented.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Conduct analyses and design information storage and retrieval systems;
2. Assist others in conducting analyses and design of information storage and retrieval systems;
3. Set up procedures for or supervise an indexing operation; and
4. Assist subject-matter specialists in setting up authority lists.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed at least one year of ADP analysis experience and have knowledge of computer programing.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ADP AUDITOR APPLICATIONS

Course D3-604

3 credits

A series of ten lectures and workshops designed to give the auditor an insight into the characteristics and methods peculiar to ADP systems and operations.

DESCRIPTION

This course is intended for the auditor, accountant, or data processor who has the demand for auditing or controlling ADP systems and/or installations. The lectures and workshops include practical study of the computers' impact on accounting methods, automated controls, audit trails, sampling techniques, system security, installation standards, planning and executing an audit of a typical system, audit reporting, and role of auditing in ADP management.

OBJECTIVES

Successful participants in this course will be able to:

1. Knowledgeably plan and complete an audit of an ADP system;
2. Install a complete system of automated controls in an ADP system;
3. Evaluate and improve audit procedures of an ADP system; and
4. Better participate in the management of systems involving automatic data processing operations and methods.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have audit training or experience and currently have or anticipate having auditor responsibility in operations involving data processing.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nonininations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ADP BUDGET AND FINANCE APPLICATIONS

Course D3-605

3 credits

A series of ten seminars and lectures designed to give personnel in budget and finance operations an insight into the characteristics and methods peculiar to ADP operations.

DESCRIPTION

This course is designed for budget and finance personnel who have limited knowledge of data processing and have need for an understanding of ADP methods and techniques as they apply to budget and finance applications.

The seminars and lectures will include a practical study of the computer impact on budget and finance operations, the planning and systeming necessary prior to the automation of budget and finance operations, the advantages to be gained and the pitfalls to avoid.

OBJECTIVES

On completion of this course, participants will:

1. Have a basic understanding of data processing;
2. Have a concept as to how computers handle budget and finance applications;
3. Understand the problems involved in computerized budget and finance operations;
4. Know the pitfalls to avoid in planning or generating computerized budget and finance applications; and
5. Be qualified to discuss and effectively work with analysts/programers on budget and finance applications.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have training in budget and finance operations or experience, and currently have or anticipate having responsibility in budget and finance operations involving data processing.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

TELEPROCESSING AND DATA COMMUNICATION SYSTEMS

Course D3-606

3 credits

A series of ten lectures, demonstrations, systems analyses, and discussions concerning principles, applications, and the "state of the art" of teleprocessing and data communication.

DESCRIPTION

As the technology of computers grows in speed and capacity and the scope of data processing increases to include nation-wide and world-wide sources of information and information needs from centralized files and a centralized processor, instantaneous long distance communication equipment and methods are demanded. This course will explore the current state of the art of high speed data communication equipment and methods, teleprocessing, real time, and batch processing. Wire, radio, teletype, data net, Telpack, communication equipment and systems will be covered as well as central processor and peripheral systems and programming methods and requirements. Cost factors, response time, and the advantages and disadvantages of various equipment and methods will be analyzed. Practical problems will be presented, visiting actual installations and analyzing these installations problems and systems solutions.

OBJECTIVES

Participants in this course will:

1. Know the principles, considerations, pitfalls, costs, and methods involved in teleprocessing and data communication;
2. Obtain in depth knowledge of actual working installations; and
3. Have broad practical principles with which to plan, install, and evaluate teleprocessing and data communication systems.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed Basic Concepts of Data Processing, D4-105, and at least one advanced data processing course or equivalent, plus vital interest in teleprocessing and data communication.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

PLANNING, PROGRAMING, BUDGETING SYSTEM (PPBS)

Course D3-714

3 credits

A series of ten seminar and workshop sessions covering the problems, challenges and concepts of PPBS.

DESCRIPTION

Bureau of the Budget Directive 66-3 established the requirement on the civilian agencies to implement the Planning-Programing-Budgeting Systems (PPBS) which has already been adopted by the Defense Department. This course covers the purpose, need and objectives of PPBS; the concepts; how it operates to assist in allocating limited resources; the weaknesses of PPBS; a comparison of PPBS with other methods and techniques; why it is being adopted; how an agency goes about implementing PPBS; what can be expected from PPBS; the use of ADP in PPBS; and the experience of some agencies with PPBS.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Understand the problems and concepts of PPBS;
2. Know how to implement PPBS;
3. Know how to use PPBS to allocate limited resources for optimum utilization; and
4. Recognize certain pitfalls of PPBS and avoid them.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should be management personnel who are involved, directly or indirectly, with PPBS.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ADP DOCUMENTATION AND WRITING

Course D3-512

3 credits

A series of ten seminars and workshops covering documentation and writing for ADP installations.

DESCRIPTION

This course is designed to cover all aspects of documentation and writing for ADP installations. Included in the course will be operations documentation, programing documentation, systems documentation, administration documentation, and report writing for non-ADP readers. The students will prepare, under the guidance of the instructor, a model procedures manual for documentation.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Write documentation standards and procedures for his own organization;
2. Assist others in preparing documentation; and
3. Create better reports and presentations on ADP subjects, especially when they are to be presented to non-ADP personnel.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should be senior programmers or programmer supervisors.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ADP FOR EXECUTIVES

Course D3-718

No credits

(Formerly D13-10)

A series of ten seminar sessions to give executives an overall perspective of ADP and an indoctrination into its basic principles.

DESCRIPTION

Executives become exposed to new concepts of planning and management by participating in seminars and authoritative speakers who introduce disciplines and a new set of management criteria.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Understand the history and growth of ADP;
2. Explain in a non-technical manner the logic employed in ADP systems;
3. Understand the management considerations involved in planning, setting up, and managing ADP systems; and
4. Be familiar with representative equipment, its application and potential.

SCHEDULE

Classes meet Mondays through Fridays 9:00 to 11:30 a.m.

Courses will be held:

Fall: October 2-13, 1967

Winter: January 8-19, 1968

Spring: March 4-15, 1968

Nominations due:

September 1, 1967

December 15, 1967

February 1, 1968

QUALIFICATIONS

Participation is limited to 25 executives at the GS-12 (or equivalent) level and above.

COURSE FEE

\$140.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

HUMAN FACTORS IN DATA PROCESSING

Course D3-722

3 credits

A series of ten workshops, seminars, and lectures covering the various human factors affecting a data processing operation.

DESCRIPTION

This is a practical course dealing with human relations problems in organizations, with particular emphasis on the data processing environment. Interpersonal skills in an ADP operation will be explored and discussed. A framework for understanding and handling interpersonal problems in such areas as training, motivation, leadership, and morale will be offered.

OBJECTIVES

On completion of this course, participants will:

1. Understand the basic principles of human behavior as they relate to creativity, job commitment, and production;
2. Be acquainted with a practical approach to personnel problems; and
3. Understand the factors that influence morale in an ADP operation.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have the responsibility for the work of subordinates i.e., Director, Deputy Director, Branch Chief, Section Head, Project Leader, or equivalent responsibilities.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

INTRODUCTION TO OPERATIONS RESEARCH

Course D3-533

3 credits

A series of fifteen lecture/seminars designed to introduce the student to the nature of Operations Research.

DESCRIPTION

This course will cover the genesis and subsequent development of Operations Research emphasizing its characterizing methodology, the mathematical model. These topics will be discussed in broad terms whereas the more specific tools of Operations Research such as Probability Theory and Statistics will be treated in more detail. Linear programming and methods used in the preparation and analysis of data and experimental results will also be discussed. Demonstration of the applicability and versatility of Operations Research will take the form of a review and discussion of case histories taken from industry, civil government and military research.

OBJECTIVES

The objectives of this course are to:

1. Trace the development of Operations Research and explain its basic methodology—the mathematical model;
2. Develop some of the tools of Operations Research so that the student will understand some of the capabilities and limitations of the methodology; and
3. Expose the student to some of the administrative aspects of carrying out Operations Research in his own organization.

SCHEDULE

Classes meet Saturday mornings from 9:00 a.m. to 12:00 noon.

Courses will be held:

Nominations due:

Fall: September 30, 1967-January 27, 1968

September 1, 1967

Spring: February 17-May 25, 1968

January 15, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a minimum of two years college mathematics and/or statistics.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

LINEAR PROGRAMING

Course D3-532

3 credits

A series of fifteen lecture/seminars designed to introduce the student to the nature of Linear Programing.

DESCRIPTION

This course will emphasize the simple theory and applications of Linear Programing. The theory enables the student to grasp the basic concepts while the applications broaden and exemplify these concepts. Topics included are: Linear Program Formulations, Graphical Solution Techniques, the Simplex Method, Duality, and the Transportation Problem. To provide for a basic understanding, case studies, and the various methods for solving linear programs will be emphasized.

OBJECTIVES

The objectives of this course are:

1. To teach the fundamental technisues and methods for solving linear programs;
2. To provide the student with numerous actual examples and cases; and
3. To show the student how to define and solve his own linear programing problems.

SCHEDULE

Classes meet Saturday mornings from 9:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30, 1967-January 27, 1968

Spring: February 17-May 25, 1968

Nominations due:

September 1, 1967

January 15, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a minimum of two years of college mathematics and/or statistics.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ADP TRANSPORTATION APPLICATIONS

Course D3-724

3 credits

A series of ten seminars and workshops on computer applications of land, sea and air transportation problems.

DESCRIPTION

This course is designed to explore the area of systems design in the transportation field. Subject matter in the field of transportation and computer capability are available. Bridging the gap between the two is an area that remains to be explored. Examples of classic problems confronting the transportation field are examined in detail to give the student insight into the ramifications of the problem and an opportunity to develop a system solution. The currently accepted solution which is used in the field is presented to illustrate the ingenious techniques developed by leaders in transportation system design work.

In some cases several solutions are examined and evaluated to illustrate that there is more than one possible solution and quite often the differences are slight or a matter of preference.

OBJECTIVES

Upon completion of this course, the participant will have more insight into the many techniques employed in the field and will be equipped to better utilize the capabilities of electronic computer equipment as a tool in solving the many problems in the field of transportation.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have senior analyst and senior program training and experience or equivalent.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

SIMULATION APPLICATIONS

Course D3-728

3 credits

A series of ten lectures, colloquia and/or workshops concerning the theory and application of simulation.

DESCRIPTION

Primarily digital-computer oriented, the course will touch on other techniques of simulation: analogue and manual. It will include the theory necessary to comprehend the large-scale simulations to be used as examples. The areas of these examples include games of war and management as well as simulations in personnel systems, industrial job-shops, computer systems, traffic control, communications networks and inventory control systems. Exposure will be given in the very basics of two simulation programming languages—SIMCSRIPT and SPSS. Using these basics the student will formulate and program some simulations which will then be run on a computer in his presence. Each student will be expected to deliver a written and oral report on a simulation in an area of his choice which he has researched.

OBJECTIVES

Provide the student with the basis for an appreciation of the utility and limitations of simulation, especially as a tool of management.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: October 7-December 16, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have one year of college mathematics, algebra, or business statistics or equivalent, and have responsibilities or interest in management.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

STATISTICAL METHODS FOR RESEARCH WORKERS

Course D3-742

3 credits

A series of ten seminars for the statistician to become familiar with the use of computers in statistical research.

DESCRIPTION

This course is designed to cover general aspects of (1) sampling distributions and statistical inference as associated with estimation and testing of hypotheses; (2) design, analysis, and interpretation of data from experiments or sample surveys; (3) uses of chi-square, analysis of variance and analysis of covariance; and (4) basic design principles of completely randomized, randomized block, Latin square, split plot, incomplete blocks, factorials and confounding. Included in the seminars will be basic concepts, principles and procedures for applying computer techniques to the subjects mentioned above with emphasis on preparing systems and program specifications.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Understand concepts of probability, sampling and experimental error, statistical inference and hypothesis testing;
2. Set up an appropriate survey design for sample surveys or research experiments;
3. Analyze statistical data collected from sample surveys and research experiments using one or more of the basic designs studied; and
4. Set up and write ADP specifications for computer analysis programs for analyzing statistical data.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a minimum of nine semester hours of college mathematics and/or statistics, that includes a recent course in elementary or intermediate statistical methods. Familiarity with ordinary methods of tabulation of experimental or sample survey data and some background in basic computer concepts is desirable.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

STATISTICAL METHODS FOR FEDERAL EXECUTIVES

Course D3-13

No credits

A series of twelve seminars for the non-statistician who uses statistical results in planning and problem-solving.

DESCRIPTION

This course is designed for the non-statistician executive who needs a grasp of fundamental concepts and a general understanding of the more sophisticated applications of statistical methods.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Understand the development, need, and growth of statistical theory and methods in government;
2. Explain the ways in which modern statistical theories and practices can be used in dynamic management; and
3. Communicate with specialists in the field and understand and interpret their reports.

SCHEDULE

Classes meet Mondays, Wednesdays, and Fridays, from 9:30 to 11:30 a.m.

Seminars will be held:

October 2-27, 1967

March 4-29, 1968

Nominations due:

September 1, 1967

February 1, 1968

QUALIFICATIONS

Participation is limited to 20 executives. Open to executives at the GS-13 (or equivalent) level and above.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

COMPUTER SOLUTION OF STATISTICAL ANALYSIS PROBLEMS

Course D3-732

3 credits

A series of 14 seminar and workshop sessions covering statistical methods and the application of computers to their use.

DESCRIPTION

The course briefly reviews the principles on which statistical techniques are based. Topics to be emphasized will be the analysis of variance, correlation, multiple regression, and curve fitting. Computer solutions with widely available generalized analysis programs will be emphasized in the discussion of each statistical technique. Case studies and actual computer solutions will be used with each of the analysis procedures studied.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Solve data analysis problems using the more basic statistical techniques; and
2. Utilize certain widely available computer programs to carry out these statistical analyses.

SCHEDULE

Classes meet Saturday mornings from 9:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30, 1967-January 20, 1968

Spring: February 17-May 18, 1968

Nominations due:

September 1, 1967

January 15, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a minimum of one course in college algebra, one course in basic statistics, and some concept of the use of electronic computers, or the equivalent work experience.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ADP ENGINEERING APPLICATIONS

Course D3-743

3 credits

A series of ten lecture and workshop sessions for engineers with no previous experience with digital computers.

DESCRIPTION

This course is intended to acquaint the engineer who has no previous experience with digital computers with the areas of application of a general purpose digital computer to engineering problems. Subjects covered will include a short history of computing, what a computer is and what it works with, mathematical methods, programing languages with an emphasis on FORTRAN, and discussions of specific engineering applications. There will be an opportunity to program and check out short jobs on a computer.

OBJECTIVES

This course is intended to provide the engineer with enough background knowledge to enable him to determine the feasibility of the effective and economic use of a computer for various applications and to develop procedures for best utilization of the computer.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Enrollment is limited to those persons with a degree in engineering or the physical sciences, or with equivalent experience in the field. No experience with a digital computer is required.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

COMPUTER EVALUATION AND SELECTION

Course D3-744

3 credits

A series of ten seminar and workshop sessions designed for Executives and Managers who need to know how to evaluate and select computers and peripheral equipment.

DESCRIPTION

This course is designed to cover the many aspects of automatic data processing equipment acquisition. Among the material to be included in the seminars will be the feasibility study, the applications study, equipment specifications, the evaluation of proposals, site preparation and installation, parallel operations, conversion, government regulations and agency policies. Although the course will be geared to computer equipment acquisition, peripheral and supporting equipment will also be covered. Case studies and problems will be discussed and analyzed.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Know how to conduct and evaluate both the ADP feasibility and ADP application studies;
2. Prepare equipment specifications to solicit proposals and to be able to evaluate the proposals submitted by manufacturers;
3. Design the lay-out of equipment for installation;
4. Plan and phase-in operations on the equipment to gain maximum machine utilization; and
5. Recognize government regulations, including the Brooks Bill, and policies affecting ADP equipment acquisition and know what they mean.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should be supervisory personnel who are, or expect to be, involved in ADP equipment acquisition.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

COSTING COMPUTER OPERATIONS

Course D3-746

3 credits

A series of ten lectures supplemented by class problems covering all aspects of data processing cost consideration.

DESCRIPTION

This course includes the description and consideration of all cost elements of data processing; computer central processors, input/output devices, manpower and special equipment, data preparation and distribution, system analysis and programing, overheads and contingencies. Recording techniques, methods and devices are studied. The incorporation of all these elements into a meaningful system of cost accounting, diagnosis, and forecasting completes this practical course in ADP cost study. Problems of batch and job processing, open and closed shop, and multiprogramed computer systems will be covered.

OBJECTIVES

At the completion of this course the participant will have the principles and practice necessary to:

1. Set up a complete system for computer installation cost accounting;
2. Diagnose cost reports and set standards for all phases of ADP operations; systems, programing, and machine operations;
3. Estimate and forecast overall and individual ADP project costs; and
4. Study existing and proposed ADP installations and make them more efficient.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967
Winter: January 6-March 9, 1968
Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967
December 15, 1967
March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have experience in computer systems analysis, programing, operations and/or supervision or management.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

DATA PROCESSING MANAGEMENT

Course D3-747

3 credits

A series of ten seminar and workshop sessions covering data processing management.

DESCRIPTION

This course is designed for both those who actually manage automatic data processing installations and those managers, who are subject matter oriented, and are users of ADP services. Included in the material to be presented at the seminars are: ADP equipment acquisition; ADP cost analysis; the preparation of action plans for ADP applications; personnel recruiting, staffing, training and retraining; human behavior in ADP; establishing standards for ADP; establishing ADP controls and measurements; management information systems; government regulations and agency policies affecting ADP; and ADP contract administration. Case studies and problems will be discussed and analyzed.

OBJECTIVES

On completion of this course, the participant will be able to:

1. Recognize ADP management problems and be able to pursue appropriate courses of action in their solution;
2. Evaluate ADP applications to determine priorities, cost analysis, and time schedules;
3. Know the ADP personnel problems and possible solutions;
4. Recognize the human element in ADP;
5. Establish standards and controls in ADP to insure the most efficient use and benefits are derived from the system; and
6. Establish a management information system.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should be supervisory personnel who either manage ADP facilities or are subject matter supervisors who use, or anticipate use of, ADP services.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

SEMINAR IN ADP MANAGEMENT

Course D3-754

3 credits

A series of ten seminars on a post-graduate level dealing with class selected ADP management problems.

DESCRIPTION

This course is coordinated study of ADP management, including a combination of lectures, discussions, reading, research, and reporting. The class will be divided into study groups after an introduction and organization meeting, in which the participants will select subjects to be pursued. Subsequent meetings will include lectures, discussions and reports. Each group will prepare an oral and written report of their research. A bound copy of all the written reports will be given to each student at the completion of the course. Typical subjects include recruitment, selection, training, evaluation, salary, administration, organization, etc. The course may be taken more than once for credit since the areas of management researched will vary with each session.

OBJECTIVES

This course will give the participants:

1. Research opportunities to study and develop principles of management as applied to the unique functions of ADP;
2. A colloquium for practicing ADP manager;
3. Development of methods and practice of these methods and immediate application to their own shops and situations; and
4. Basis for building a unique body of ADP management principles.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. This course is open to ADP managers, assistant managers, and a few prospective ADP managers. Participants should have completed Data Processing Management, D3-747, or equivalent.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

FEDERAL CONTRACTING FOR ADP SOFTWARE PRODUCTS

Course D3-594

3 credits

A series of ten seminar and workshop sessions covering the contracting in the Federal Government for ADP Software Products.

DESCRIPTION

The course is designed to bring together persons with contracting experience or responsibilities for the purpose of receiving and exchanging information pertinent to the successful contracting and awarding of automatic data processing work in the Federal Government. The course will be directed to ADP Systems Analysis, Programing, Documentation, ADP Operations, other than the computer itself, the site and utilities or computer maintenance.

ADP contracting skills will be developed and improved through lecture, group and panel discussions; classroom case studies; Requests for Proposal structuring, techniques of evaluation and selections, negotiating and make-up of the contractual documents.

OBJECTIVES

Upon completion of this course, the participant will be able to contract for ADP Services related to:

ADP Feasibility Studies
System Analysis
System Design
Operational Analysis

Programing (Scientific and Business)
Program Conversion Techniques
ADP Operational Services
EAM Services

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 25 students, usually GS-11 and above who have had no prior or limited contracting experience in ADP. The course is also open to ADP industry or company employees with Contracting or Marketing responsibilities. Consideration will be given to individuals in GS-7 and above presently engaged in ADP Contracting work. Nominees should be well versed in the general overall Federal Contracting methods, laws, and regulations and have a genuine motivation to work in this field.

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ADP MEDICAL APPLICATIONS

Course D3-756

3 credits

A series of ten seminar and workshop sessions covering ADP Medical Applications.

DESCRIPTION

This course is designed to be a survey of medical applications of ADP. Included in the seminars will be discussion of the hardware configurations available to a medical complex and record maintenance applications in both the administrative and patient history. Other discussions will be directed toward utilization of the computer as a tool for medical research and real time patient monitoring. The emphasis of the course will be placed on realization and insight into practical applications of the computer within a hospital environment.

OBJECTIVES

On completion of this course the participant will be able to:

1. Possess a basic insight into ADP systems and programing of medical applications;
2. Recognize potential ADP application to the medical environment; and
3. Participate with the subject matter specialist in design of such a system.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:

Fall: September 30-December 9, 1967

Winter: January 6-March 9, 1968

Spring: March 23-May 25, 1968

Nominations due:

September 1, 1967

December 15, 1967

March 1, 1968

QUALIFICATIONS

Participation is limited to 20 students. Participants should have formal education or practical experience in medical environment.

COURSE FEE

\$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

ADP CAREER COUNSELING

A service designed to assist the individual in determining his aptitude in the field of data processing.

DESCRIPTION

The counseling consists of two sessions:

1. Individual takes a practical ADP aptitude test and completes a specially developed questionnaire to list his training and experience and to indicate his response to inquiries that may be helpful to the counselor in advising him in regard to a career in ADP.
2. Individual has an interview with an experienced and competent counselor in the data processing field to evaluate results of ADP test, education, experience, training and special interests of the individual. Results are confidential and are revealed only to the individual.

Sessions are by appointment only, either at 8:00 a.m. weekdays or Saturday mornings. Appointments are arranged to meet the mutual convenience of the individual and the counselor.

FEE

\$20.00, payable in advance. Registration forms may be obtained from the Special Programs Department, Graduate School, U.S.D.A., National Press Building, Room 277, Washington, D. C. 20004.

For further information contact Office of the Manager of Training in Computer Sciences, phone 388-3247 or code 111-3247.

FACULTY

CURRICULUM OF COMPUTER SCIENCES

- ALEXANDER, WILLIAM T., (1966). B.S., California State. Head of Programers, Data Processing Section, Federal Deposit Insurance Corporation. Taught in Montgomery County Public Schools.
- BEARDEN, GARY D., (1964). M.S., Texas A & M. Director, Washington Data Processing Center, Statistical Reporting Service, USDA. Taught at Texas Technological & U. S. Air Force Statistical Services Officer School.
- BLACKWELL, ROBERT B., (1967). A.B., American University. Chief, Educational Systems, Veterans Administration.
- BROWN, HAROLD E., (1965). Systems Engineer, IBM.
- BUCKMASTER, HERBERT L., (1966). M.S., Texas A & M. Mathematical Statistician, George Washington University.
- BUREN, RONALD S., (1967). Applications Analyst, Control Data Corporation.
- BURGIS, DONALD R., (1965). B.A., Pennsylvania. Digital Computer Systems Analyst, Automatic Data Processing Division, Domestic and International Business, Department of Commerce.
- BURGLER, NORMAN L., (1967). B.A., George Washington. Systems Engineer, Burroughs Corp.
- CASSIDY, WILLIAM J., (1967). B.S., Maryland. Digital Computer Programmer, Civil Aeronautics Board.
- CHAROUHIS, GREGORY J., (1967). Burdett Business College. Digital Computer Specialist, Department of Commerce.
- CLOSE, KENNETH G., (1964). B.S., River Falls State (Wisc.). Chief, Programming Branch, Bureau of Public Roads, Department of Transportation. Taught at River Falls State.
- CONNOLLY, JOHN J., (1967). B.B.A., Minnesota. Computer Specialist, Department of Commerce.
- COOK, LEROY L., JR., (1962). B.A., Albion. Systems Engineer, CDC.
- COPPER, B. FRANK, (1967). B.A., Maryland. Systems Representative, RCA.
- COYLE, PAT, (1967). M.S., University of Illinois. Computer Applications Consultant, Washington, D.C.
- DANIELS, JOHN E., (1967). B.A., George Washington University. Head, Computer Systems Analyst Section, FAA.
- DENIT, LOUIS M., (1964). Chief, Production Control Branch, Washington Data Processing Center, Statistical Reporting Service, USDA. Taught in Richmond Public Schools.
- DOLES, WILLIAM E., (1967). Contract Specialist, Goddard Space Flight Center, NASA.
- FENNER, STANLEY, D., (1967). B.A., University of New Mexico. Systems Specialist, Burroughs Corporation.
- FERBER, JOHN L., (1967). B.S., Georgetown University. Computer Systems Analyst, NASA.
- FRAHER, J. J., (1967). M.S., Drexel Institute of Technology, Chief of Special Projects, Management Information System Division, NASA.
- FRENCH, BURTON L., (1967). Ph.D., Iowa State Univ. Econometrician, Economic Research Service, USDA.
- FRY, ELGIN G., (1963). B.S., Oklahoma State. Chief, Mathematical and Survey Applications Br., Washington Data Processing Center, SRS, USDA.
- GARGANO, H. MICHAEL, (1967). B.S., Virginia Polytechnic Institute. Acting Chief, Data Processing and Math. Section, National Center for Radiological Health, U. S. Public Health Service, HEW. Taught in U. S. Army Reserves.
- GARLOCK, ROBERT A., (1967). M.A., George Washington University. Director, Management & Organization Division, Office of Administration for Domestic and International Business, Department of Commerce.

- GARON, ALBERT C., (1967). B.A., Maryland University. Planning-Programming-Budgeting Systems Officer, Economic Development Agency, Department of Commerce.
- GIBBS, ROBERT L., (1967). B.A., Randolph-Macon. Systems Manager, NASA.
- HALL, RALPH E., (1967). B.S., Univ. of Rhode Island. Applications Analyst, Control Data Corporation. Taught in Rhode Island Public Schools.
- HAMMERSLA, R. H., (1967). Systems Engineer, Burroughs.
- HOWE, LAWRENCE J., (1967). A.B.A., American University. Technical Assistant to Director of Systems Division, Naval Facilities Engineering Command.
- KAITZ, HYMAN B., (1967). M.A., George Washington University. Director, Industrial Research & Growth Staff, BSDA, Department of Commerce.
- KENNEVAN, WALTER J., (1967). M.C.S., Columbus University. Director, Data Processing Systems Division, Office of the Comptroller, Department of the Navy.
- KIBLER, WILLIAM E., (1963). M.S.A., Georgia. Head, Statistical Methods Group, Research and Development Branch, Standards and Research Division, Statistical Reporting Service, USDA.
- KLING, RICHARD H., (1967). B.A., San Francisco State. Systems Analyst, Economic Development Administration, Department of Commerce. Former Systems Analyst and project leader with Honeywell.
- LAIR, JAMES A., (1966). Head, Scheduling Unit, Washington Data Processing Center. Statistical Reporting Service, USDA. Taught at Washington Data Processing Center.
- LONG, RAYMOND J., (1967). LL.B., Catholic University. Director, ADP Division, Office of Administration for Domestic and International Business, Department of Commerce.
- MARTIN, WILLIS S., JR., (1967). B.A., Franklin and Marshall College. Instructor, Washington Educational Center, IBM.
- McDANIEL, BENJAMIN T., (1967). Ph.D., North Carolina State. Geneticist, Animal Husbandry Research Division, Agricultural Research Service, USDA.
- MEAD, GEORGE ROBERT, (1967). M.S., USN Postgraduate School. Consultant, Management Sciences, UNIVAC. Former lecturer, The American University.
- MILLER, ROBERT H., (1965). Ph.D., North Carolina State. Geneticist, Animal Husbandry Research Division, Agricultural Research Service, USDA.
- NESUDA, ALBERT R., (1967). B.A., Boston University. Chief, Standards and Procedures Branch, Washington Data Processing Center, SRS, USDA.
- NUSSBAUM, ERNEST, (1967). M.E.A., George Washington University. Consulting Analyst, Washington Computer Application Office, General Electric Information Service Dept.
- ONDORFF, ROBERT, (1967). George Washington Univ. Systems Analyst, Navy Command Systems Support Activities, Department of the Navy.
- PABST, WILLIAM R., (1966). Ph.D., Columbia University. Chief Statistician, Naval Ordnance Systems Command.
- PARENT, ELIAS A., JR., (1967). Ph.D., Stanford. Staff Assistant, Office of the Assistant Secretary of Defense (Systems Analysis).
- PASKO, THEODORE V., (1967). B.S., Syracuse Univ. Systems Engineer, IBM.
- PETERS, DARREL F., (1967). Contract Specialist, Chief, Division of Administrative Service, OMS, USDA.
- RABIL, EDWARD J., (1967). B.A., Atlantic Christian. Senior Systems Analyst, UNIVAC.
- REEVE, RONALD D., (1966). B. of A.E., Cornell Univ. Marketing Representative, IBM.
- SCHROEDER, ROGER GLENN, (1967). Ph.D., Northwestern. Systems Analyst, Office of the Secretary of Defense. Taught at U. S. Naval Postgraduate School.

- SLADE, GRANT E., (1966). B.A., N.M. Highlands U. Bureau of International Commerce, Computer Prog. ADP Division, DIB, Dept. of Commerce. Taught at N.M. HU—Computer Programming 65-66.
- SMITH, RAYMOND W., (1967). A.B., Nebraska. Systems Analyst, Bureau of Public Roads, Department of Transportation.
- SMITH, ROBERT S., (1964). Ph.D., Illinois. Staff Analyst, Research Analysis Corporation. Taught at Illinois.
- STANDIFER, G. VAN, (1967). Peters Business School. Systems Analyst, Bureau of Public Roads, Department of Transportation.
- STRITE, RICHARD S., (1967). B.A., Shepherd. Systems Analyst, Data Processing Division, Bureau of Statistics, CAB. Taught in West Virginia High Schools.
- SULLIVAN, JAMES W., (1967). B.E.E., Manhattan. Systems Engineer, IBM Corp.
- SUTER, GLENN W., (1957). M.S., Virginia Polytech. Head, Enumerative Surveys Section, Survey and Data Division, Statistical Reporting Service, USDA. Taught at Bridgewater and Shenandoah.
- VELANDER, WALLACE E., (1967). B.A., University of Maryland. Head, Data and Reports Management Section, NASA.
- WATTENBERG, ALBERT M., (1967). B.S., University of Maryland. Systems Specialist, Burroughs Corp.
- WILLEY, EDMUND G., (1967). Senior Systems Analyst, Bureau of Public Roads, Department of Transportation.
- ZINGER, NORMAN GRIFFITH, (1967). B.A., American University. Psychodramatist, Department of Health, Education, and Welfare.

Curriculum in Management And Professional Development

This series of courses and seminars is designed to provide educational experiences tailored for specific groups of supervisors, managers, and other professionals in Federal Agencies. To the extent possible, each course provides opportunities to explore problem areas which have been found to be common among the professional groups for which the courses are designed.

To assist the Graduate School Staff in maintaining the currency and pertinence of the courses relative to Agencies' needs, special advisory committees provide guidance.

Committee on Public Administration, General Management and Supervision

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ROBERT STOCKMENT
Small Business Administration

BERTRAM STRAUSS
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Agricultural Stabilization
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Department of Agriculture

Critical Issues and Decisions Program

The Critical Issues and Decisions program was developed by the Graduate School in 1961 to provide a broadening educational experience for executives which was not being offered in the Washington area. The original set of readings for the program was prepared under contract by the American Foundation for Continuing Education. Each offering of the program has been critically evaluated and improved upon; consequently, the program is continually modified to reflect the changing needs of the executive participants.

As a public service, the Graduate School has offered free lectures by Critical Issues and Decisions scholars, and three of the lecture series have been published and are available from the Graduate School Press.

Critical Issues and Decisions Committee

JOHN G. LORENZ
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Development

CHESTER NEUDLING
Office of Education

JAMES REESE
National Aeronautics and
Space Administration

CRITICAL ISSUES AND DECISIONS FOR FEDERAL EXECUTIVES

Course D6-5

A series of seminars held twice weekly for six weeks for career executives in positions of high responsibility.

DESCRIPTION

Under the personal and direct tutelage of leading writers and scholars the participants become better acquainted with some of the most critical issues facing this country. Emphasis is placed on conducting a joint search for knowledge and understanding. Scholars who have appeared in the program include David Riesman, Henry Steele Commager, Peter Odegard, Hans Morgenthau, Erich Fromm, Max Lerner, Leon Keyserling, and Arthur Schlesinger, Jr.

This program is conducted in two phases. The first is an all-day session for introduction and orientation. The second is a series of 2-hour seminar meetings.

OBJECTIVES

On completion of this course, the participant will be better able to:

1. More critically evaluate problems confronting the government;
2. Apply more incisive analytical techniques in formulating policies and making decisions in his agency; and
3. Cultivate a broad base of knowledge and experience in areas of governmental concern.

SCHEDULE

Fall

Phase I—November 1, 1967, 9:30 a.m.-4:30 p.m.

Phase II—November 6, 8, 14, 15, 21, 22, 28, 29

December 5, 6, 12, 13, 1967

Seminar A: 10:00 a.m.-12 noon

Seminar B: 1:30-3:30 p.m.

Nominations due: October 6, 1967

Spring

Phase I—March 26, 1968, 9:30 a.m.-4:30 p.m.

Phase II—April 2, 3, 9, 10, 16, 17, 23, 24, 30

May 1, 7, 8

Seminar A: 10:00 a.m.-12 noon

Seminar B: 1:30-3:30 p.m.

Nominations due: March 1, 1968

QUALIFICATIONS

Participation is limited to Federal executives of the GS-14 (or equivalent) level or above and a few promising potential executives below that level. Seminar groups are limited to 25.

COURSE FEE

\$235.00, payable in advance. Fee includes text books and class material.

For further information, call D. W. Henderson, Seminar Administrator, on Code 111 (DU 8-) 3247.

MANAGEMENT DEVELOPMENT PROGRAM FOR FEDERAL EXECUTIVES

Course D6-100 (FE)

A program of in-town sessions and an out-of-town workshop for executives who have had little formal training in current management concepts and practices.

DESCRIPTION

This program is designed for officials with executive responsibilities, or who anticipate managerial assignments. The program should be of especial value to those with little *formal* training in the concepts and practices of management as an emerging, separate profession.

Participants will be encouraged to critically reexamine their jobs and those of their subordinates. Subsequently, they will explore ways to implement the concept of the *work team* as a basic production entity within the organization. The study of *team building* will include an exposure to the theory and practice of conflict resolution and developing more functional working relationships through interpersonal laboratory learning. For maximum learning, participation should be on a voluntary basis.

Other learnings participants can anticipate include: sharpening their perception of individual and supervisory behavior; gaining insights into the process of groups and group problem-solving; measuring and obtaining achievement of organizational objectives; and understanding current theories of management, communications, and motivation.

OBJECTIVES

This program is designed to help the participant:

1. Examine the managerial aspects of his job;
2. Formulate for himself a framework of managerial theory;
3. Explore ways to improve managerial practice in the day-to-day work situation;
4. Strengthen his problem solving and team action skills; and
5. Formulate a continuing and systematic program of self-development in management.

SCHEDULE

The program is conducted in three phases, extending over several months. The first is a two-day diagnostic and planning meeting in Washington. Williamsburg, Virginia, is the site of the second phase, an intensive six-day workshop. The program concludes with a two-day follow-up session in Washington, where members assess the practical application of ideas gained from the program.

Thirty-Third Program

Phase I —November 2 and 3, 1967

Phase II —December 3 to 8, 1967

Phase III—January 11 and 12, 1968

Nominations due: September 29, 1967

Thirty-fourth Program

Phase I —November 9 and 10, 1967

Phase II —December 10 to 15, 1967

Phase III—January 25 and 26, 1968

Nominations due: October 6, 1967

Thirty-fifth Program

Phase I —December 14 and 15, 1967

Phase II —January 21 to 26, 1968

Phase III—February 2 and 3, 1968

Nominations due: November 10, 1967

Thirty-sixth Program

Phase I —February 1 and 2, 1968

Phase II —March 3 to 8, 1968

Phase III—April 11 and 12, 1968

Nominations due: January 5, 1968

QUALIFICATIONS

This program is designed for men and women in executive and managerial positions at the GS-14 (or equivalent) level and above. Managers at the GS-13 level will be considered. In so far as possible, participants are selected to insure a wide cross-section of Federal agencies.

COURSE FEE

\$450.00, payable in advance. Fee includes text books and class material. Travel and per diem are in addition.

For further information, call W. H. Sears, Jr., on Code 111 (DU 8-) 3247.

MANAGEMENT PROGRAM FOR EXECUTIVES IN SCIENTIFIC AND ENGINEERING ORGANIZATIONS

Course D6-100 (S&E)

A program of in-town sessions and an out-of-town workshop focusing on the special management problems confronting executives in engineering and scientific organizations.

DESCRIPTION

Managers of scientific and engineering programs are challenged as never before to organize and operate their programs so that the scientists and engineers on their staffs may fully develop and use their creative abilities. Supervision within these fields has become a major area of concern. This program focuses specifically on those management problems faced by executives in scientific and engineering organizations.

Participants are involved in planning and developing their own workshop program within the framework of established objectives. The emphasis of the program usually includes: the establishment and use of performance objectives, group dynamics and inter-personal relations, human relations, motivation, communications, delegation, organization, supervision, managerial styles, planning, controlling, coaching, decision-making, role playing, effective use of time and committees and case study writing and analysis. Opportunity is provided for small group exchanges of experience and problem solving discussions. This program provides a cornerstone for the continuing self-development of the government executive. For maximum learning, participation in this program should be on a voluntary basis.

University, government, business and industrial authorities are used as resources. Some of these experts in teaching managerial concepts have recently included Dr. William Van Dersal, author of the book *The Successful Supervisor* and the television series *Success in Supervision*; William Oncken of Oncken Associates, New York City, noted management consultant for business and government; Dr. Jerry Harvey of National Training Laboratories; Dr. Lee Buchanan, Medical Director for the Department of Agriculture; Nathan Baily, Dean of the School of Business Administration at American University; Dr. Marshall Dimock, famed administrator, Dean and teacher of Public Administration; Robert Stockment of Small Business Administration; and James Bostain, of the Foreign Service Institute and winner of an educational television "Emmy."

OBJECTIVES

This program is designed to help the participant from a scientific or engineering organization:

1. Examine the managerial aspects of his job;
2. Formulate for himself a framework of managerial theory;

3. Explore ways to improve managerial practice in the day-to-day work situation;
4. Strengthen his problem solving and team action skills; and
5. Formulate a continuing and systematic program of self-development in management.

SCHEDULE

The program is conducted in three phases, extending over several months. The first is a two-day diagnostic and planning meeting in Washington. During this time, needs of the participants are identified and analyzed. Williamsburg, Virginia, is the site of the second phase, an intensive six-day workshop, tailored to the needs of those attending. The program concludes with a two-day follow-up session in Washington, where attention is given to assessing the practical application of ideas gained from the program.

Eighth Program

Phase I —September 28 and 29, 1967

Phase II —October 22 to 27, 1967

Phase III—November 30 and December 1, 1967

Nominations due: August 18, 1967

Ninth Program

Phase I —November 9 and 10, 1967

Phase II —January 7 to 12, 1968

Phase III—February 15 and 16, 1968

Nominations due: October 13, 1967

Tenth Program

Phase I —January 18 and 19, 1968

Phase II —February 25 to March 1, 1968

Phase III—March 28 and 29, 1968

Nominations due: December 15, 1967

QUALIFICATIONS

This program is designed for men and women in executive and managerial positions at the GS-14 (or equivalent) level and above. Managers at the GS-13 level will be considered. In so far as possible, participants are selected to insure a wide cross-section of Federal agencies.

COURSE FEE

\$450.00, payable in advance. Fee includes text books and class material. Travel and per diem are in addition.

For further information, call D. W. Henderson or Ellen Gobetz on Code 111- (DU 8-) 3247.

HUMAN FACTORS IN ORGANIZATIONS: A MANAGEMENT SEMINAR

Course D6-16

A five-day seminar to increase participants' understanding of, and effectiveness in, human relationships in organizations.

DESCRIPTION

This seminar is designed to provide an opportunity for participants to look at their effectiveness as supervisors, subordinates, and members of groups by examining pertinent research from the behavioral sciences. Through role-playing, case discussions, problem-solving, and small group activities, research on organizations and what makes them function effectively will be presented.

OBJECTIVES

On completion of this seminar, participants will have:

1. An increased understanding of the behavior typically found in organizations;
2. An heightened awareness of their own motivations and attitudes; and
3. The knowledge to improve their personal effectiveness within their organizations.

SCHEDULE

Classes will meet Monday through Friday, 9:00 a.m. to 5:00 p.m.

Courses will be held:

November 27-December 1, 1967

January 29-February 2, 1968

April 8-12, 1968

Nominations due:

October 16, 1967

January 5, 1968

March 11, 1968

COURSE FEE

\$150.00 payable in advance. Fee includes text books and class material.

For further information, call W. H. Sears, Jr., on Code 111 (DU 8-) 3247.

SENIOR MANAGER'S SEMINAR

Course D6-17

A five-day seminar on management systems for managers with broad program responsibilities.

DESCRIPTION

This seminar is designed to provide insight into the systems approach to management and program coordination. It will present the systems concept as a means for developing a multi-discipline team approach to problem-solving and its application to management information systems for various applications. Also to be discussed are the manager's role in developing systems and their utility in optimizing the use of allocated resources.

OBJECTIVES

On completion of this seminar, participants will:

1. Have a working familiarity with the systems approach to meeting organizational objectives;
2. Have new insight into their roles as managers; and
3. Feel an increased responsibility for developing the systems approach to management within their agencies.

SCHEDULE

Classes will meet Monday through Friday, 9:00 to 5:00.

Courses will be held:

October 9-13, 1967

April 22-26, 1968

Nominations due:

September 11, 1967

March 25, 1968

COURSE FEE

\$150.00, payable in advance. Fee includes text books and class material.

For further information, call W. H. Sears, Jr., on Code 111 (DU 8-) 3247.

SEMINAR FOR PROFESSIONAL WOMEN

Course D6-22

A three-day seminar to provide professional women with an opportunity to look for further ways to achieve their full potential in areas "programmed by men."

DESCRIPTION

One of the significant developments in the continuing emancipation of women in our society has been the "arrival" of the woman executive as a professional manager. However, women who aspire to realize their full potential for making contributions as executives still find a thorny path to follow. This seminar will provide participants an opportunity to discuss pertinent issues with authoritative resource people and, in the process, develop new insights into their own quest for making greater contributions and achieving self-actualization.

OBJECTIVES

On completion of this seminar, participants will have:

1. An increased comprehension of, and confidence in, their potential for making unique contributions to management; and
2. More courage to seek the "free ground" of mutual respect and partnership where both men and women can make their greatest contributions.

SCHEDULE

Classes will meet 9:00 to 5:00, Monday through Wednesday.

Courses will be held:

September 25-27, 1967

March 11-13, 1968

Nominations due:

September 4, 1967

February 12, 1968

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

For further information, call W. H. Sears, Jr., on Code 111 (DU 8-) 3247.

SENIOR SUPERVISOR'S SEMINAR

Course D6-18

An advanced 30-hour course in supervisory practices for experienced supervisors who want to become more effective in their jobs.

DESCRIPTION

This advanced seminar is designed to provide senior supervisors with the latest proven techniques and approaches to solving "people problems" and in planning, organizing, and completing on-schedule assignments which are part of overall program objectives. Changing management concepts, technology, and the composition of the work force demand that supervisors remain current with leadership practices which result in more effective supervision. This seminar is for senior supervisors who have not recently had formal training.

OBJECTIVES

On completion of this seminar, participants will be able to:

1. Chart work requirements against time requirements;
2. Conduct successful interviews with employees needing corrective counseling; and
3. Better understand the supervisor's responsibility for maintaining employee morale through the effective use of delegation.

SCHEDULE

Classes will meet Monday through Friday, 1:00 to 5:00.

Courses will be held:

October 9-20, 1967

February 19-March 4, 1968

Nominations due:

September 11, 1967

January 19, 1968

COURSE FEE

\$135.00, payable in advance. Fee includes text books and class material.

For further information, call W. H. Sears, Jr., on Code 111 (DU 8-) 3247.

INTRODUCTION TO SUPERVISION AND MANAGEMENT

Course D4-5

An introductory course for supervisors with limited training in supervision and management and for employees about to assume supervisory responsibilities.

DESCRIPTION

Many people begin their first supervisory jobs without understanding the requirements for effectiveness. The attitudes and skills involved in working individually may need to be modified in order that those needed in supervising others may be developed.

This course is designed for the new supervisor or person under consideration for a supervisory position. Its primary purpose is to enable the supervisor to acquire the management skills and knowledge needed to carry out his supervisory responsibilities.

OBJECTIVES

This course is aimed at helping the individual:

1. Become acquainted with literature in the field;
2. Understand modern concepts of supervision and management;
3. Formulate for himself a sound approach to management; and
4. Analyze and solve supervisory and managerial problems.

SCHEDULE

Classes meet Monday through Friday, 9:00-12:30 p.m.

Courses will be held:

October 9-20, 1967

February 19-March 4, 1968

Nominations due:

September 11, 1967

January 19, 1968

QUALIFICATIONS

Participation in this course is open to anyone without formal training in supervision and management. The program is designed for those within GS-7 to GS-13 grade level. Consideration will be given applicants below GS-7 who are being considered for supervisory positions and whose agencies recommend attendance.

COURSE FEE

\$135.00, payable in advance. Fee includes text books and class material.

For further information, call W. H. Sears, Jr., on Code 111 (DU 8-) 3247.

SUPERVISION AND THE ADMINISTRATIVE PROCESS

Course D4-109

DESCRIPTION

This course is designed to develop knowledge and skills in the techniques of supervision as related to the administrative process. It is appropriate for first line supervisors or those employees anticipating assignment to duties requiring supervisory capability. It is also appropriate for administrative assistants and other administrative personnel who have a need for understanding the administrative process and who have contact with "People Problems" in their everyday work schedule.

OBJECTIVES

Upon completion of this course the participant will be better able to:

1. Use effective supervisory techniques in manpower utilization;
2. Understand the federal administrative process and its relation to supervision; and
3. Develop a program of self development as a supervisor.

SCHEDULE

4:15 to 6:05 p.m. each Wednesday afternoon for 16 weeks beginning October 4, 1967 and ending January 24, 1968. Classes will be held in Conference Room B-243, Interior Building between 18th and 19th and C and D Streets, Washington, D. C.

Nominations due: September 8, 1967

COURSE FEE

\$70.00, payable in advance. Fee includes text books and class material.

For further information call D. W. Henderson, Code 111-(DU 8-) 3247, or Claude R. Wright, Code 111-(343-) 5086.

SEMINAR ON PERFORMANCE STANDARDS AND PROGRAM OBJECTIVES

Course D6-19

A three-day seminar to introduce program managers to a managerial tool which can provide new meaning and effectiveness to PPB and other management systems.

DESCRIPTION

All the current emphasis on different forms of managing by objectives will have little impact if there is not a concurrent emphasis on standards of performance directly related to management's objectives. The performance standards concept, as presented in this seminar, is a *developmental tool*—to measure the man against his job and to help him grow to new levels of responsibility and productivity.

OBJECTIVES

On completion of this seminar, each manager will be able to:

1. Analyze his own and subordinates' jobs in terms of primary "pay-off" functions;
2. Develop agreements with subordinates for meeting specific objectives which are time-phased for accomplishment; and
3. Insure his own success by systematically developing a high degree of competence in his subordinates.

SCHEDULE

Courses will be held:

September 25-27, 1967

May 6-8, 1968

Nominations due:

September 1, 1967

April 8, 1968

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

For further information, call W. H. Sears, Jr., on Code 111 (DU 8-) 3247.

TECHNICAL INFORMATION AND DECISION-MAKING: A SEMINAR

Course D6-21

A three-day seminar for managers interested in systems which efficiently and economically serve management's need for scientific and technical information.

DESCRIPTION

The rapid growth of science and technology over the past 25 years has been accompanied by an exponential increase in the volume of information. This increase has been accompanied, in turn, by an increase in the interest in problems of effective management and use of scientific and technical information. This seminar will explore the current state of the art of information systems development and information handling technology. Various aspects of the so-called information problem will be analyzed, and examples of various systems will be presented. Future trends in information management programs of government and industry and their impact on the Federal Manager and his role and function will conclude the seminar.

OBJECTIVES

On completion of this seminar, participants should:

1. Have a better understanding of the problems involved in handling scientific and technical information; and
2. Know how to review and evaluate their own technical information programs and how to begin planning for improved systems.

SCHEDULE

Classes will meet Monday through Wednesday, 9:00 to 5:00.

Courses will be held:

October 2-4, 1967

May 20-22, 1968

Nominations due:

September 11, 1967

April 22, 1968

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

For further information, call W. H. Sears, Jr., on Code 111 (DU 8-) 3247.

SEMINAR FOR PERSONNEL OFFICERS

Course D6-23

A three-day seminar in which new dimensions of the personnel officer's role will be explored.

DESCRIPTION

This seminar is designed to take a look at ways in which personnel programs can be modified to become more responsive to agency needs—by getting the personnel officer into the operating sections as an in-house consultant to line managers. This will include discussions of labor-management relations and the personnel officer's responsibility in helping line managers cope with a changing labor market. Along the same line, discussion will center around the personnel officer's role in helping managers formalize their expectations of subordinates in a manner which will create more effective and productive employee appraisals.

OBJECTIVES

On completion of this seminar, participants will be able to:

1. See the potential for broader cooperation with line managers within their agencies; and
2. Develop a plan for their self-development to meet the expectations that new personnel functions will create.

SCHEDULE

Classes will meet 9:00 a.m. to 5:00 p.m., Monday through Wednesday.

Courses will be held:

October 23-25, 1967

April 1-3, 1968

Nominations due:

September 25, 1967

March 4, 1968

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

For further information, call W. H. Sears, Jr., on Code 111 (DU 8-) 3247.

OPERATIONAL PROBLEMS IN PERSONNEL MANAGEMENT

Course D6-304

DESCRIPTION

This course is designed to develop knowledge and skills in personnel management. It is appropriate for employees beginning personnel work and it will enlarge and further develop the skills of those employees already in the area of personnel management. Instructors will be successful personnel officers with a wide range of experience and capability in discussing the many and varied problems that arise in the personnel area. The course will qualify as two credit hours in the regular course work of the graduate school. Class will be limited to 25 participants.

OBJECTIVES

This program is designed to help the participant:

1. Develop within a broad area of subject matter appropriate to the profession of personnel work;
2. Share experiences and the application of policy in a wide range of situations; and
3. Obtain a better understanding of basic policy, rules and regulations that guide personnel actions.

SCHEDULE

4:15 to 6:05 p.m. each Tuesday afternoon for 16 weeks beginning October 3, 1967 and ending January 23, 1968. Classes will be held in conference room B-243, Interior Building, between 18th and 19th and C and D Streets, Washington, D.C.

Nominations due: September 11, 1967

COURSE FEE

\$85.00, payable in advance. Fee includes text books and class material.

For further information, call D. E. Richard, Code 111 (DU8-) 3247 or Claude R. Wright, Code 183 (DI3-) 5086.

SEMINAR FOR GOVERNMENT ECONOMISTS

Course D6-24

A three-day seminar to explore the broadened range of economic problems which must be dealt with by the government economist.

DESCRIPTION

This seminar will examine in depth some of the problems which face the government economist and tend to limit his effectiveness as a professional person. Among the problems to be discussed are: identifying and analyzing the problems in using available data; identifying and analyzing the relationship of the economist to staff members of other disciplines; and identifying and analyzing the relationship of the economist to his superiors in the decision-making process.

OBJECTIVES

On completion of this seminar, participants will have:

1. New insights into their relationships with peers in other disciplines and with agency decision-makers; and
2. An ability to see some continuing problems in a new perspective.

SCHEDULE

Classes will meet Monday through Wednesday, 9:00 to 5:00.

Courses will be held:

November 27-29, 1967

May 27-29, 1968

Nominations due:

October 30, 1967

April 29, 1968

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

For further information, call W. H. Sears, Jr., on Code 111 (DU8-) 3247.

SEMINAR FOR INFORMATION OFFICERS

Course D6-25

A three-day seminar in which information officers can examine means for extending their effectiveness as specialists within their organizations.

DESCRIPTION

This seminar is designed to take a close look at the credentials and activities of the information officer as they relate to meeting agency objectives. Too often, the information officer finds himself limited in the contributions he can make as a professional person. Through an examination of case histories and current managerial trends, along with directed self-evaluation, this seminar should enable participants to find means for making larger contributions to their respective organizations.

OBJECTIVES

On completion of this seminar, participants will be able to:

1. Gain greater insight into the potential for service which exists for information officers; and
2. Establish a stronger bond with management in seeking to achieve agency objectives.

SCHEDULE

Classes will meet Monday through Wednesday, 9:00 to 5:00.

Courses will be held:

November 6-8, 1967

May 20-22, 1968

Nominations due:

October 9, 1967

April 22, 1968

COURSE FEE

\$100.00, payable in advance. Fee includes text books and class material.

For further information, call W. H. Sears, Jr., on Code 111 (DU8-) 3247.

SEMINAR FOR EMPLOYEE DEVELOPMENT OFFICERS

Course D6-26

A three-day seminar to explore means for beginning or extending in-house supervisory and managerial development programs.

DESCRIPTION

PPB and other management systems are creating new demands on Employee Development Officers for developing in-house programs which will equip supervisors and managers to perform at new levels of professional competence. Consequently, EDO's increasingly are being called upon to serve as change agents within the organization and as consultants to management. This seminar is designed to provide an opportunity for EDO's to take a close look at themselves and their jobs in order to come up with better means for achieving their full potential as in-house consultants to management.

OBJECTIVES

On completion of this seminar, participants will be able to:

1. Develop a model for in-house supervisory and management development programs within their agencies; and
2. Develop a plan for meeting long-range training and development needs to achieve agency objectives.

SCHEDULE

Classes will meet Monday through Friday, 9:00 to 5:00.

Courses will be held:

October 30-November 1

March 11-13, 1968

Nominations due:

October 2, 1967

February 12, 1968

COURSE FEE

\$150.00, payable in advance. Fee includes text books and class material.

For further information, call W. H. Sears, Jr., on Code 111 (DU8-) 3247.

FEDERAL CONTRACT NEGOTIATION INSTITUTE

Course D6-10

A five-day institute for Federal contracting officers designed to expand their knowledge in contract negotiation.

DESCRIPTION

This institute gives contracting officers from the field and Washington an opportunity to exchange ideas on contract negotiation. Authorities from government and industry serve as speakers and discussion leaders.

OBJECTIVES

On completion of this course, the participant will have greater proficiency and understanding of:

1. Techniques and procedures in negotiation;
2. Human factors in negotiation;
3. Legal requirements and administrative policy in negotiation; and
4. Contract award and administration.

SCHEDULE

Classes meet Monday through Friday, 9:00 a.m. to 5:00 p.m.

Institutes will be held:

September 25-29, 1967
October 23-27, 1967
February 26-March 2, 1968
May 14-18, 1968

Nominations due:

August 28, 1967
September 22, 1967
January 26, 1968
April 21, 1968

QUALIFICATIONS

Participation in each Institute will be limited to 25 Federal officials, GS-9 (or equivalent) and above, selected to insure a wide representation of agencies.

COURSE FEE

\$130.00, payable in advance. Fee includes text books and class material.

For further information, call D. E. Richard, Code 111 (DU8-) 3247.

POWER SYSTEMS ENGINEERING

Course D8-423

A two-semester course to introduce and update engineers to the field of power systems engineering and operations.

DESCRIPTION

Seminars are composed of outstanding speakers from government, industry, and university departments who appear as guest lecturers. (Six credit hours are given.)

OBJECTIVES

On completion of this course the engineer will:

1. Have a better perspective concerning his particular responsibilities in relation to the over-all field of power systems;
2. Understand his role in power supply, planning, and operation;
3. Recognize the responsibilities and contributions of other specialists; and
4. Understand the latest advances in modern power systems.

SCHEDULE

September 7, 1967 through May 9, 1968, each Thursday, 6:00-8:30 p.m.

Nominations due: August 7, 1967

QUALIFICATIONS

This course is open to graduate engineers, or the equivalent in experience in power systems, who have a breadth of interest in the field. The course will be of interest to electrical, mechanical, and civil engineers as well as key management personnel responsible for power systems operations.

COURSE FEE

\$225.00, payable in advance. Fee includes text books and class material.

For further information, call D. W. Henderson, Code 111 (DU-8) 3247; or John Rixse, Code 182 (DU3-) 7683.

RESEARCH METHODS IN THE SOCIAL SCIENCES

Course D7-800

A series of seminar sessions to relate logic, mathematics, and research methods drawn from different sources to research techniques employed in social sciences.

DESCRIPTION

Each of the 14 sessions features select guest speakers who present various topics. Time is allowed for questions, comments, and discussion.

OBJECTIVES

To equip oncoming research leaders with a broader perspective for prospective responsibilities by:

1. Giving them the benefit of observations based upon experience of an earlier generation of successful research leaders;
2. Stressing the fundamental motivations and objectives that have yielded scientific progress;
3. Showing the interplay of knowledge and methods acquired through different scientific disciplines;
4. Tracing the influence of distinctive philosophic roots that have shaped science in Western culture; and
5. Appraising the significance of recent breakthroughs in scientific methods.

SCHEDULE

Classes meet Wednesdays, 1:00-3:00 p.m.

Course will be held:

September 20-January 3, 1968

Nominations due:

August 27, 1967

QUALIFICATIONS

Participation is limited to 25, usually GS-12 and above, with graduate training or responsible experience in research and current occupancy of a position entailing research responsibilities.

COURSE FEE

\$150.00, payable in advance. Fee includes text books and class material.

For further information, call D. W. Henderson, Code 111 (DU8-) 3247.

THEORY AND PRACTICE OF GAS CHROMATOGRAPHY

Course D5-23

A two-day scientific course

DESCRIPTION

The course is designed to benefit those with a limited amount of experience in gas chromatography as well as those new to the field. Although the most recent developments will be emphasized, the course is not a research conference for experts. The material will be of interest to those working in the laboratory as well as to those interested in evaluating the technique.

Lectures will cover basic principles and practices of gas chromatography. The presentation of physical concepts rather than mathematical derivations will be emphasized. The instructors will be Dr. Irwin Hornstein and Dr. Morton Beroza; both are affiliated with USDA's Agricultural Research Service.

OBJECTIVES

The student at the completion of the course will be able to:

1. Understand the principles that permit complex mixtures to be separated by gas chromatography;
2. Know the limitations, advantages and modes of operation of the commonly used gas chromatography detectors; and
3. Apply the principles to actual laboratory problems.

SCHEDULE

Classes will meet on Thursday and Friday from 8:15 to 4:30 p.m.

Course will be held:

November 2-3, 1967

Nominations due:

October 9, 1967

COURSE FEE

\$45.00, payable in advance. Fee includes text books and class material.

For further information, call D. W. Henderson, Code 111 (DU8-) 3247.

SCIENCE INFORMATION AND COMMUNICATION

Course D6-80

A five-day seminar for scientists and engineers to acquaint them with modern information services.

DESCRIPTION

This course was developed under a grant from the National Science Foundation. The seminar includes demonstration tours of major information activities in the Washington area.

OBJECTIVES

On completion of the course, participants will:

1. Understand the principles and practices of organizing and disseminating scientific and technical information;
2. Be aware of the expanding role of the Federal government in scientific information activities resulting from the accelerated growth of research and development; and
3. Know how to acquire scientific and technical information through efficient use of modern information services including new Federal information programs, specialized information centers, mechanized document retrieval systems, etc.

SCHEDULE

Courses will be held:

December 4-8, 1967

April 8-12, 1968

Nominations due:

November 10, 1967

March 11, 1968

QUALIFICATIONS

Nominees should be working scientists and engineers and their supervisors, in GS-13 (or equivalent) level and above.

COURSE FEE

\$135.00, payable in advance. Fee includes text books and class material.

For further information, contact John Sherrod, on Code 119 (973-) 4371; or D. W. Henderson, Code 111 (DU8-) 3247.

SPACE MANAGEMENT: A SEMINAR

Course D6-3

A three-day seminar to help participants to develop a working knowledge of space management techniques.

DESCRIPTION

This seminar is designed to provide an opportunity for participants to gain an understanding of the detailed problems related to space management: Determination of space requirements; building design—effect on utilization; space quality—effect on utilization; space assignment; office arrangement; office equipment and furnishings; layout; templating techniques; communication facilities; moving; maintenance and upkeep; and organization of the space management function.

OBJECTIVES

On completion of this seminar, each participant will have:

1. A detailed knowledge of the many related problems to be encountered in managing space; and
2. More confidence in their ability to approach these problems in a rational, methodical manner.

SCHEDULE

Classes will meet Wednesday through Friday, 9:30 a.m. to 4:30 p.m.

Courses will be held:

September 13-15, 1967

December 6-8, 1967

February 14-16, 1968

April 24-26, 1968

Nominations due:

June 30, 1967

October 2, 1967

December 11, 1967

February 19, 1968

COURSE FEE

\$115.00, payable in advance. Fee includes text books and class material.

For further information, call D. E. Richard, Code 111 (DU8-) 3247.

SECRETARIAL TECHNIQUES

Course D4-6

DESCRIPTION

This short course is designed to help the secretary become a more efficient, productive, self-reliant aid to the executive. It will encompass and emphasize the following topics:

1. Performance, such as organization, memory management of time and work;
2. Personality, such as appearance, behavior and attitudes; and
3. Communications, such as telephone manners, letter writing, and editing.

OBJECTIVES

Upon completion of this course the participant will be better able to:

1. Understand and thus fulfill better her position as an executive aid;
2. Organize time and office duties more effectively;
3. Screen correspondence more efficiently;
4. Write and edit correspondence more effectively;
5. Achieve a better image for the office by improved relations with office visitors and telephone contacts.

SCHEDULE

Courses will be held:	Times:	Nominations due:
June 19-30, 1967	9:30-12:30 p.m.	May 29, 1967
July 10-21, 1967	1:30- 4:30	June 19, 1967
August 7-18, 1967	9:30-12:30	July 17, 1967
September 11-22, 1967	9:30-12:30	August 21, 1967
October 9-20, 1967	1:30- 4:30	September 18, 1967
November 6-17, 1967	1:30- 4:30	October 16, 1967
December 11-22, 1967	1:30- 4:30	November 20, 1967
January 8-19, 1968	9:30-12:30	December 18, 1967
February 5-16, 1968	1:30- 4:30	January 15, 1968
March 11-22, 1968	1:30- 4:30	February 19, 1968
April 8-19, 1968	1:30- 4:30	March 18, 1968
May 13-24, 1968	9:30-12:30	April 22, 1968

QUALIFICATIONS

Classes are limited to 25 participants to allow maximum time for individual participation.

COURSE FEE

\$50.00, payable in advance. Fee includes text books and class material.

For further information, call D. W. Henderson or Loreen DeMetro on Code 111 (DU8-) 3247.

FACULTY

CURRICULUM IN MANAGEMENT AND PROFESSIONAL DEVELOPMENT

AUSTIN, CHARLES F. Ph.D., Harvard. Colonel, Infantry, USA (Ret'd). Formerly on Staff of Industrial College of the Armed Services, and has served as professorial lecturer at The George Washington University and at The American University.

BACK, WILLIAM. Ph.D., Iowa State. Staff economist, National Advisory Commission on Rural Poverty. Taught at Oklahoma State and Oregon State.

BALDAUF, TONY M. Assistant Director, Procurement and Property Management, Office of Plant and Operation, USDA. (Office Techniques and Public Administration.)

BEARDEN, GARY. M.S., Texas A. & M. Director, Washington Data Processing Center, Statistical Reporting Service, USDA. Taught at Texas Technological College.

DEMETRO, LOREEN. M.A., Wisconsin. Educational Specialist, Graduate School, USDA. Taught at Wisconsin State University and General Services Administration Institute.

DUDLEY, HELEN. B.S., Simpson College. Project Officer for Management Development, Training and Development Division, Office of the Deputy Chief of Staff for Personnel, Department of the Army.

EITINGTON, JULIUS E. M.A., University of Chicago. Chief, Training Branch, Division of Personnel Management and Manpower, National Park Service.

FRY, ELGIN G. B.S., Oklahoma State. Head, Mathematical and Survey Applications Section, Washington Data Processing Center, Statistical Reporting Service, USDA.

GUNTHER, V. SAMUEL. Chief, Contract and Procurement Management Division, Office of Plant and Operations, USDA.

HENDEE, CLARE. M.A., George Washington, Deputy Chief for Administration, Forest Service, USDA.

HERRELL, HENRY G. LL.B., National (George Washington). Deputy Administrator, Management, Consumer and Marketing Service, USDA.

HOFFMAN, MARION. B.A., District of Columbia Teachers' College. Taught in Prince George's County Adult Education Division, Department of the Navy.

HORNSTEIN, IRWIN. Ph.D., Georgetown. Research Chemist, Market Quality Research Division, Agricultural Research Service, USDA.

- KIBLER, WILLIAM E. M.S.A., Georgia. Statistical Methods Section, Research and Development Branch, Standards and Research Division, Statistical Reporting Service, USDA.
- LEVDAHL, LAWRENCE. B.A., University of Virginia. Teacher and Consultant for various educational and governmental organizations.
- PALLANSCH, MICHAEL J. Ph.D., Minnesota. Head, Concentrated Milk Investigations, Eastern Utilization Research Branch, Agricultural Research Service, USDA. Taught at Georgetown.
- PERLMUTTER, JEROME H. M.A., The American University. Chief, Publishing and Reproduction Services, Department of State.
- POULIOT, LEONARD B. M.A., The George Washington University. Senior Program and Organizational Specialist, Office of Management Planning, Department of State. Also, Associate Professorial Lecturer in the School of Business and Public Administration, The George Washington University.
- RIXSE, JOHN H., JR. B.S., Registered Professional Engineer. Chief, Power Division, Office of Engineering, Agency for International Development, Department of State. Taught at The University of Virginia.
- SCHAEFER, WILLIS C. Ph.D., University of Chicago. Management Analyst, Office of Management Planning, Department of State. Formerly with System Development Corporation and the RAND Corporation.
- SHERROD, JOHN. M.S., Pennsylvania State University. Assistant Director for Systems Development. Division of Technical Information, Atomic Energy Commission. Also a professorial lecturer at Rutgers University.
- STOCKMENT, ROBERT L. Chief of Training, Small Business Administration. Formerly Director of Programs, American Management Association.
- STRAUSS, BERTRAM. B.S., Wharton School of Business Administration. Consultant to federal state and local governments. Formerly a foreign service reserve officer.
- TRELOGAN, HARRY. Ph.D., Minnesota. Administrator, Statistical Reporting Service, USDA. Taught at Minnesota.
- WHITE, MACKEY W. B.S. (Architecture), Tulane. Assistant Director of Plant and Operations, USDA. Responsible for real estate and space management in USDA since 1943.
- WRIGHT, CLAUDE R. M.S., East Texas State Teachers College. Assistant Chief, Division of Employment and Training, Office of Personnel Management, Office of the Secretary, Department of the Interior. Taught at Eastern Texas State Teachers College and Oklahoma University.

Center for Modern Learning Technology

As modern innovations in educational theory and methodology are developed, there needs to be an implementation and practical application of these theoretical concepts.

The Graduate School's Center for Modern Learning Technology provides group and individual education through the use of programmed learning and other modern learning methodology. Programmed instruction helps the student advance confidently in easy, step-by-step procedures through difficult material. He learns at his own pace and receives immediate confirmation on his progress. **Programmed instruction** is a major educational breakthrough, but it cannot completely succeed without the planning and control of a **training department** and the counseling and guidance of a **qualified instructor**. The Center provides these essential elements within our programs in order to achieve the most effective learning situation.

The objectives of the Center are:

1. To offer programmed courses in various subject-matter fields that can be completed at one time or **broken up** over an extended period to fit **individual or agency needs**.
2. To provide professional assistance or subject matter tutors to help the student select and complete programmed courses fitted to his interests and needs.
3. To offer programmed instruction seminars and workshops to acquaint participants with programmed instruction theory and applications.
4. To attempt the new and difficult in achieving for the individual a more meaningful learning experience.

Center for Modern Learning Technology Committee

CHARLES BAKER, Census Bureau, Department of Commerce

ERWIN DRAHEIM, Office of Personnel, Department of Agriculture

JAMES E. HERBY, Post Office Department

CHESTER NELSON, U.S. Air Force, Department of Defense

LESTER REDDING, Small Business Administration

WARREN SEARLS, Consumer and Marketing Service, Department of
Agriculture

WILLIAM F. SLOAN, Post Office Department

DAVID O. WEAVER, Central Intelligence Agency

Location

U.S. Department of Agriculture Graduate School, Rooms 418W and 419W, Administration Building.

For further information please call D. W. Henderson, Supervisor of the Center for Modern Learning Technology, on Code 111 (DU8-) 3247; or Paul Barlow, Code 111 (DU8-) 6693.

BASIC STATISTICS

Course DP3-4

DESCRIPTION

This program explains and examines the basic principles upon which statistical techniques are based. The general topics covered are fundamentals of statistics; errors, accuracy and approximation; charts for named categories of data; time series; and observation for values of a variable.

The student needs only a working knowledge of fractions, ratio and proportion, and simple algebra in order to complete the course successfully.

OBJECTIVES

At the completion of this course the student should be able to understand and apply the fundamental statistical concepts to his work efforts.

SCHEDULE

One and one-half hour sessions held twice weekly for a duration of six weeks.

Times:

Section A: 9:00-10:30 Tuesday and Thursday

Section B: 10:30-12:00 Tuesday and Thursday

Courses will be held:

June 6-July 13, 1967

October 10-November 9, 1967

March 12-April 11, 1968

June 4-July 11, 1968

Nominations due:

May 15, 1967

September 18, 1967

February 19, 1968

May 13, 1968

COURSE FEE

\$55.00, payable in advance. Fee includes text books and class material.

For further information, call D. W. Henderson, Code 111 (DU8-) 3247; or Paul Barlow, Code 111 (DU8-) 6693.

CAREER ENGLISH

Course DP2-9

DESCRIPTION

This complete English program is designed to give the student a thorough comprehension and practical application of the various principles that produce effective communication.

The course is divided into three parts, grammar, punctuation and writing, and each part may be taken separately to meet student needs.

SCHEDULE

Ninety-minute sessions are held twice weekly for ten weeks for the complete course, or six weeks for grammar, and two weeks for either punctuation or writing.

Times:

Section A: 2:00-3:30 Monday and Wednesday

Section B: 3:30-5:00 Monday and Wednesday

Courses will be held:

Punctuation:

June 5-14, 1967

October 9-18, 1967

March 11-20, 1968

June 3-July 10, 1968

Writing:

June 5-14, 1967

October 9-18, 1967

March 11-20, 1968

June 3-July 10, 1968

Grammar:

June 5-July 12, 1967

October 9-November 15, 1967

March 11-April 24, 1968

June 3-July 10, 1968

Complete Program:

June 5-August 2, 1967

October 9-December 6, 1967

March 11-May 8, 1968

June 3-July 31, 1968

Nominations due:

May 15, 1967

September 18, 1967

February 19, 1968

May 13, 1968

May 15, 1967

September 18, 1967

February 19, 1968

May 13, 1968

May 15, 1967

September 18, 1967

February 19, 1968

May 13, 1968

May 15, 1967

September 18, 1967

February 19, 1968

May 13, 1968

COURSE FEE

\$95.00 for the complete program; or \$50.00 for the grammar course, \$30.00 for the punctuation course, and \$30.00 for the writing course. Tuition includes consultation sessions with the special instructor.

For further information, call D. W. Henderson or Loreen DeMetro on Code 111 (DU8-) 3247.

COMPUTERS: A FOUR-PART COURSE IN PROGRAMMING

Course DP3-9

DESCRIPTION

This course provides the beginner with an introduction to digital computer concepts and programming techniques. The student learns to present numbers and information to a hypothetical computer, solve and print mathematical problems. This process is then carried through more advanced techniques in programming and computer applications in government and science.

OBJECTIVES

At the conclusion of this course the student will be able to understand and describe in detail the fundamental programming function and processes.

SCHEDULE

One and one-half hour sessions held twice weekly for a duration of 12 weeks.

Times:

Section A: 1:00-2:30 Tuesday and Thursday

Section B: 2:30-4:00 Tuesday and Thursday

Section C: 4:00-5:30 Tuesday and Thursday

Courses will be held:

June 6-August 24, 1967

October 10-December 28, 1967

March 12-May 29, 1968

June 4-August 22, 1968

Nominations due:

May 15, 1967

September 18, 1967

February 19, 1968

May 13, 1968

COURSE FEE

\$95.00, payable in advance. Tuition includes study materials and consultation sessions with the special instructor.

For further information, call D. W. Henderson, Code 111 (DU8-) 3247; or Paul Barlow, Code 111 (DU8-) 6693.

EFFECTIVE MANAGEMENT PRACTICES

Course DP6-6

DESCRIPTION

Through the use of professional guidance, the Auto-Tutor machines, and workbook manual, this course is designed to introduce the manager to the newer concepts of managerial sciences as well as to improve his skills through review of time-tested techniques in effective management. It provides excellent training for new supervisors and middle-level managers as well as for trainees aspiring to management positions.

OBJECTIVES

At the conclusion of this course the student will be able to:

1. Better develop an organized method of determining solution to problems;
2. Sharpen his definitions of problems and understand the climate for decision making;
3. Understand the essentials of organizational theory;
4. Understand how and when to extend themselves by assigning responsibility and authority to others;
5. Identify and forecast objectives of planning and state them in meaningful terms;
6. Identify and improve the effectiveness of management controls; and
7. Manage time and deal effectively with new, time consuming assignments.

SCHEDULE

Ninety-minute classes meet twice weekly for six weeks.

Times:

Section A: 9:00-10:30 Monday and Wednesday

Section B: 10:30-12:00 Monday and Wednesday

Section C: 12:30- 2:00 Monday and Wednesday

Courses will be held:

June 5-July 12, 1967

October 9-November 15, 1967

March 11-April 24, 1968

June 3-July 10, 1968

Nominations due:

May 15, 1967

September 18, 1967

February 19, 1968

May 13, 1968

Topics:

1st week: Decision Making

2nd week: Organization Planning

3rd week: Planning

4th week: Delegation Practices

5th week: Managerial Control

6th week: Effective Use of Executive Time

COURSE FEE

\$95.00 for the complete program, or \$25.00 for each separate weekly topic. Tuition includes consultation sessions with the special instructor.

For further information, call D. W. Henderson, Code 111 (DU8-) 3247; or Paul Barlow, Code 111 (DU8-) 6693.

PRINCIPLES OF CHEMISTRY THROUGH PROGRAMMED LEARNING

Course DP5-50

A first in programmed learning to be offered by the Graduate School Special Programs Department.

DESCRIPTION

This course is designed to give the student the equivalent of a first year college chemistry course through the use of programmed instruction with professional assistance. Useful to all adults who wish to rapidly acquire a grasp of the principles of chemistry. (Six credit hours are given.)

OBJECTIVES

The student at the completion of this course will:

1. Know and understand the principles of chemistry equivalent to a two-semester college course;
2. Better understand and appreciate efforts of those engaged in chemical research; and
3. Better apply the principles of chemistry in a working laboratory situation.

SCHEDULE

Students advance at their own individual speed meeting with the professor once every two weeks for examination and needed assistance.

Classes meet every other Thursday, 6:00-8:00 p.m.

Course will be held:

October 26, 1967 to June 20, 1968

Includes holiday recess

Nomination due:

September 25, 1967

COURSE FEE

\$141.00, payable in advance. Fee includes text books and class material.

For further information, call D. W. Henderson, Code 111 (DU8-) 3247; or Paul Barlow, Code 111 (DU8-) 6693.

COMMUNICATIONS SKILLS WORKSHOP

Course D2-21

DESCRIPTION

This communications workshop combines in an integrated program three of the essential skills in communication—reading, writing, and listening. These skills will be developed and improved through classroom, laboratory, group, and programmed instruction. Instruction is oriented toward on-the-job communications of Federal employees.

OBJECTIVES

The objective of the program is to increase the overall communicative skill efficiency of each participant. This includes enabling him to:

1. At least double or triple initial reading speed while improving comprehension;
2. Improve purposefulness, flexibility, selectivity, and build critical reading skills for on-the-job reading;
3. Gain greater skill in the use of words to transmit ideas, thoughts, and feelings in dealing with individuals and groups;
4. Understand the principles of clear, forceful writing so that he may write more effectively;
5. Produce a complete accurate summary, written or oral, of spoken information;
6. Effectively organize and summarize mentally while listening to a speaker; and
7. Apply the improved listening skill (as much as 140%) automatically in their work.

SCHEDULE

A thirty-five hour course, meeting for two and one-half hours twice a week for seven weeks, on Mondays and Wednesdays from 9:15-11:45 p.m.

Courses will be held:

October 16-November 29, 1967

February 12-March 27, 1968

Nominations due:

September 25, 1967

January 22, 1968

COURSE FEE

\$95.00, payable in advance. Fee includes text books and class material.

For further information, call D. W. Henderson, Code 111 (DU8-) 3247; or Paul Barlow, Code 111 (DU8-) 6693.

EFFECTIVE LISTENING

Course D2-04

The comprehension and retention of spoken information is one of the prerequisites for effective communication.

DESCRIPTION

This is a *short and effective* application of programmed instruction with audio presentation designed for anyone whose activities require that he be able to listen effectively. *Through directed practice in the classroom*, the participant develops and retains the ability to quickly understand and summarize any oral message.

OBJECTIVES

The objective of the Effective Listening Program is to *increase the over-all listening ability* of each participant to enable him to:

1. Produce a complete, accurate summary, written or oral, of spoken information;
2. Organize materials mentally as the speaker proceeds;
3. Summarize as soon as the speaker finishes;
4. Ignore irrelevant materials and digressions;
5. Minimize the distracting effect of emotional and hurried delivery, ethnic and regional accents, background noise, and statements with which the listener may disagree; and
6. Apply the improved listening skill (*as much as 140%*) automatically in his work.

SCHEDULE

A one-day course offered on the following Fridays:

Courses will be held:

June 9, 16, 1967
July 14, 21, 1967
August 11, 18, 1967
September 15, 1967
October 20, 1967
November 17, 1967
December 8, 1967
January 19, 1968
February 16, 1968
March 15, 1968
April 26, 1968
May 24, 1968

Nominations due:

May 15, 1967
June 19, 1967
July 17, 1967
August 21, 1967
September 25, 1967
October 23, 1967
November 13, 1967
December 18, 1967
January 22, 1968
February 19, 1968
April 1, 1968
April 29, 1968

Send in nominations or call to make arrangements to attend at your convenience. Courses are offered continually throughout the year.

COURSE FEE

\$17.00, payable in advance. Fee includes text books and class material.

For further information, call D. W. Henderson or Loreen DeMetro on Code 111 (DU8-) 3247.

EFFECTIVE WRITING

Course D2-10

A six-week course to learn to write for specific audiences.

DESCRIPTION

Participants learn by doing as they present their own work for criticism and evaluation by instructor and group. Exercises are used to develop clarity and conciseness. Classes are kept small to allow extensive individual consultation.

OBJECTIVES

On completion of this course, the participant will:

1. Be able to communicate in writing his ideas and findings to administrators, the public, and other specialists; and
2. Have developed the ability to look critically at his writing.

SCHEDULE

Classes meet Tuesdays and Thursday, 9:30-11:30 a.m.

Courses will be held:

September 19-October 26, 1967
January 2-February 8, 1968
March 5-April 11, 1968

Nominations due:

August 21, 1967
December 11, 1967
February 12, 1968

QUALIFICATIONS

Participation is limited to 10 to 12 individuals in professional positions.

COURSE FEE

\$95.00, payable in advance. Fee includes text books and class material.

For further information, call D. W. Henderson or Loreen DeMetro on Code 111 (DU8-) 3247.

GOVERNMENT REPORT AND LETTER WRITING

Course D2-12

DESCRIPTION

This short course is designed to improve the caliber of Government reports and correspondence through the use of lectures, class discussions, programmed instruction and individual counseling on writing exercises.

The essentials of good report and letter writing will be covered. The letter writing section of the course is planned to emphasize sincerity, simplicity, clarity, and conciseness. These principles will be carried over to the report writing, which will also emphasize the importance of assembling and analyzing information, planning the outline, writing the rough draft and rewriting the report.

OBJECTIVES

Upon completion of this course the participant will be better able to:

1. Plan and organize his reports, letters, memoranda, and other correspondence;
2. Write more simply, clearly and concisely; and
3. Achieve more strength and vigor in his writing through the use of exact words, active verbs, style variations and sentence structures.

SCHEDULE

Courses will be held:	Times:	Nominations due:
May 8-19, 1967	9:30-12:30	April 17, 1967
June 19-30, 1967	1:30- 4:30	May 29, 1967
July 24-August 4, 1967	9:30-12:30	July 3, 1967
August 21-September 1, 1967	1:30- 4:30	July 31, 1967
September 25-October 6, 1967	9:30-12:30	August 28, 1967
October 23-November 3, 1967	1:30- 4:30	October 2, 1967
November 20-December 1, 1967	1:30- 4:30	October 30, 1967
January 22-February 2, 1968	1:30- 4:30	January 2, 1968
February 19-March 1, 1968	1:30- 4:30	January 29, 1968
March 25-April 5, 1968	1:30- 4:30	March 4, 1968
April 22-May 3, 1968	1:30- 4:30	April 1, 1968
May 27-June 7, 1968	9:30- 4:30	May 6, 1968

QUALIFICATIONS

Classes are limited to 20 participants to allow maximum time for individual participation.

COURSE FEE

\$50.00, payable in advance. Fee includes text books and class material.

For further information, call D. W. Henderson or Loreen DeMetro on Code 111 (DU8-) 3247.

READING IMPROVEMENT PROGRAM

Course D2-95

A 24-hour course to improve reading efficiency of adults with average or above average reading ability.

DESCRIPTION

This course incorporates the latest and most advanced techniques for developing the maximum potential of each individual learner. Instruction is oriented toward on-the-job reading of Federal employees.

OBJECTIVES

On completion of this course, the participant will:

1. Be able to read most materials at double or triple his initial reading speed while maintaining comprehension;
2. Have developed a more organized and effective approach to on-the-job reading matter; and
3. Have improved his purposefulness, flexibility, and selectivity in reading.

SCHEDULE

Each course is scheduled with three sections; each section is limited to 20 participants. Sections meet Tuesdays and Thursdays as follows:

Section A: 9:30-11:00 a.m.

Section B: 11:00-12:30 p.m.

Section C: 1:30- 3:00 p.m.

Courses will be held:

May 9, June 29, 1967

July 11-August 31, 1967

Nominations due:

April 17, 1967

June 19, 1967

Sections beginning from September on will meet on Tuesdays and Thursdays as follows:

Section A: 8:00-10:00 a.m.

Section B: 10:00-12:00 p.m.

Section C: 1:00- 3:00 p.m.

Courses will be held:

September 12-October 20, 1967

October 24-December 5, 1967

December 7-January 25, 1968

(recess during holidays)

January 30-March 7, 1968

March 12-April 18, 1968

April 23-June 4, 1968

Nominations due:

August 21, 1967

October 2, 1967

November 13, 1967

January 8, 1968

February 19, 1968

April 1, 1968

QUALIFICATIONS

Open to all Federal employees in grades GS 5-18.

COURSE FEE

\$55.00, payable in advance. Fee includes text books and class material.

For further information, call D. W. Henderson, Code 111 (DU8-) 3247, or Paul Barlow on Code 111 (DU8-) 6693.

SUMMER STUDY SKILLS

DESCRIPTION

This Special Study Skills Summer Session is designed to offer college-bound students an opportunity to sharpen their basic skills (reading, writing, listening and note-making) before entering or returning to college in the Fall. *This is not a remedial program.* It is an intensive, 48-hour skill-development program designed to give entering freshmen a head-start and upper classmen a boost in their academic careers.

This program, which was offered to twenty students in the summer of 1966, was evaluated highly by the participants after applying their skills during the past school year. Typical comments were:

“the program helped me survive the impact of college life”

“it helped me make a 3.8 grade average”

“it helped me to be placed on the Dean’s List”

Unanimously, the students agreed they would highly recommend this program.

We have improved the program this year by revising the content and shortening the duration. We have also broadened the offering to include students who have already had some college but need to sharpen their study skills.

OBJECTIVES

The objective of the Summer Study Skills is to aid the college student to increase his overall study skills ability in order that he may:

1. Attain better grades;
2. Have greater confidence in approaching his academic career;
3. Adjust more successfully to college demands;
4. Listen more critically in order to produce a complete accurate summary, written or oral, of spoken information;
5. Double or triple initial reading speed while improving comprehension, retention, and recall;
6. Write more simply, clearly and concisely for college-level requirements; i.e., term papers, book reviews; and
7. Take effective and meaningful notes through use of an ABC form of shorthand.

SCHEDULE

This course is composed of 48 hours of intense study over a six week period. Students will spend 3 hours in Reading Improvement, 2 hours in Effective Writing, 2 hours in Stenoscript and one hour in Effective Listening each week. Classes will meet as follows:

July 10-August 16, Mondays and Wednesdays, 9:30-11:30 a.m. and 1:00-3:00 p.m.

Nominations due: June 19

LOCATION

At the Center for Modern Learning Technology, U.S. Department of Agriculture Graduate School, 14th and Independence Avenue, Washington, D.C.

TUITION

Cost per person is \$98.00, including tuition, workbooks, and handout materials. **Individual counseling and attention will be emphasized.**

This program is *not* limited to sons and daughters of federal employees.

For further information, contact D. W. Henderson, Code 111 (DU8-) 3247; or Paul Barlow, Code 111 (DU8-) 6693.

CAREER COUNSELING

A new service designed to help the individual identify his special abilities and potential.

DESCRIPTION

The counseling program consists of:

- An initial interview to determine the individual's needs and obtain necessary background information.
- Tests to explore the individual's vocational abilities and interests to help clarify his career potential, and determine his educational needs.

All counseling is done by professional members of the National Vocational Guidance Association. Results are confidential and are revealed only to the individual.

Sessions are by appointment only, either in the evenings or on Saturdays. Appointments are arranged to meet the mutual convenience of the individual and the counselor. There are usually three or more sessions of two hours each.

FEE

\$40.00, payable in advance. Registration forms may be obtained from the Special Programs Department, Graduate School, USDA, 271 National Press Building, Washington, D. C. 20004.

For further information, contact W. H. Sears, Jr. on Code 111 (DU8-) 3247.

NOMINATION DUE DATES

	Course Begins	Nominations Due
Effective Listening	April 14	March 20
Government Report and Letter Writing	May 8	April 17
Reading Improvement Program	May 9	April 17
Effective Listening	May 12	April 17
Effective Management Practices	June 5	May 15
Career English	June 5	May 15
Computers: A Four-Part Course in Programming	June 6	May 15
Basic Statistics	June 6	May 15
Effective Listening	June 16	May 15
Government Report and Letter Writing	June 19	May 29
Secretarial Techniques	June 19	May 29
Summer Study Skills	July 10	June 19
Secretarial Techniques	July 10	June 19
Reading Improvement	July 11	June 19
Effective Listening	July 14	June 19
Space Management: A Seminar	September 13	June 30
Government Report and Letter Writing	July 24	July 3
Secretarial Techniques	August 7	July 17
Effective Listening	August 11	July 17
Government Report and Letter Writing	August 21	July 31
Power Systems Engineering	September 7	August 7
Eighth Management Program for Executives in Scientific and Engineering Organizations	September 28	August 18
Effective Listening	September 15	August 21
Effective Writing	September 19	August 21
Secretarial Techniques	September 11	August 21
Reading Improvement Program	September 12	August 21
Research Methods in the Social Sciences	September 20	August 27
Federal Contract Negotiation Institute	September 25	August 28
Government Report and Letter Writing	September 25	August 28
All Computer Sciences Courses	September 30	September 1
Seminar on Performance Standards and Professional Objectives	September 25	September 1
Seminar for Professional Women	September 25	September 4
Supervision and the Administrative Process	October 4	September 8
Technical Information and Decision Making: A Seminar	October 2	September 11
Operational Problems in Personnel Management	October 3	September 11
Senior Managers' Seminar	October 9	September 11
Senior Supervisors' Seminar	October 9	September 11
Introduction to Supervision and Management	October 9	September 11
Secretarial Techniques	October 9	September 18
Career English	October 9	September 18
Effective Management Practices	October 9	September 18
Computers: A Four-Part Course in Programming	October 10	September 18
Basic Statistics	October 10	September 18
Federal Contract Negotiation Institute	October 23	September 22
Seminar for Personnel Officers	October 23	September 25
Communications Skills Workshop	October 16	September 25
Effective Listening	October 20	September 25
Principles of Chemistry through Programmed Learning	October 26	September 25

NOMINATION DUE DATES (Cont'd)

	Course Begins	Nominations Due
33rd Management Development Program for Federal Executives	November 2	September 29
Government Report and Letter Writing	October 23	October 2
Reading Improvement Program	October 30	October 2
Seminar for Employee Development Officers	October 24	October 2
Space Management: A Seminar	December 6	October 2
Critical Issues and Decisions for Federal Executives	November 1	October 6
34th Management Development Program for Federal Executives	November 9	October 6
Critical Issues and Decisions for Federal Executives	December 5	October 6
Theory and Practice of Gas Chromatography	November 2	October 9
Seminar for Information Officers	November 6	October 9
Ninth Management Program for Federal Executives in Scientific and Engineering Organizations	November 9	October 13
Secretarial Techniques	November 6	October 16
Human Factors in Organizations: A Management Seminar	November 27	October 16
Effective Listening	November 17	October 23
Government Report and Letter Writing	November 20	October 30
Seminar for Government Economists	November 27	October 30
Science Information and Communication	December 4	November 10
35th Management Development Program for Federal Executives	December 14	November 10
Effective Listening	December 8	November 13
Reading Improvement Program	December 7	November 13
Secretarial Techniques	December 11	November 20
Effective Writing	January 2	December 11
Space Management: A Seminar	February 14	December 11
10th Management Program for Executives in Scientific and Engineering Organizations	January 18	December 15
Most Computer Sciences Courses	January 6	December 15
Secretarial Techniques	January 8	December 18
Effective Listening	January 19	December 18
Government Report and Letter Writing	January 22	January 2
Human Factors in Organizations: A Management Seminar	January 29	January 5
36th Management Development Program for Federal Executives	February 1	January 5
Reading Improvement Program	January 30	January 8
Secretarial Techniques	February 5	January 15
Human Factors in Data Processing	February 17	January 15
Computer Solution of Statistical Analysis Problems	February 17	January 15
Introduction to Operations Research	February 17	January 15
Senior Supervisor's Seminar	February 19	January 19
Introduction to Supervision and Management	February 19	January 19
Effective Listening	February 16	January 22
Federal Contract Negotiation Institute	February 26	January 26
Government Report and Letter Writing	February 19	January 29
Statistical Methods for Federal Executives	March 4	February 1
Effective Writing	March 5	February 12
Seminar for Professional Women	March 11	February 12
Seminar for Employee Development Officers	March 11	February 12
Secretarial Techniques	March 11	February 19

NOMINATION DUE DATES (Cont'd)

	Course Begins	Nominations Due
Career English	March 11	February 19
Effective Management Practices	March 11	February 19
Basic Statistics	March 12	February 19
Reading Improvement Program	March 12	February 19
Computers: A Four-Part Course in Programming	March 12	February 19
Effective Listening	March 15	February 19
Space Management: A Seminar	April 24	February 19
Most Computer Sciences Courses	March 23	March 1
Critical Issues and Decisions for Federal Executives	March 26	March 1
Government Report and Letter Writing	March 25	March 4
Seminar for Personnel Officers	April 1	March 4
Human Factors in Organizations: A Management Seminar	April 8	March 11
Science Information and Communication	April 8	March 11
Secretarial Techniques	April 8	March 18
Senior Managers' Seminar	April 22	March 25
Government Report and Letter Writing	April 22	April 1
Reading Improvement Program	April 23	April 1
Effective Listening	April 26	April 1
Seminar on Performance Standards and Program Objectives	May 6	April 8
Federal Contract Negotiation Institute	May 14	April 21
Secretarial Techniques	May 13	April 22
Seminar for Information Officers	May 20	April 22
Technical Information and Decision Making: A Seminar	May 20	April 22
Effective Listening	May 24	April 29
Seminar for Government Economists	May 27	April 29
Government Report and Letter Writing	May 27	May 6
Career English	June 3	May 13
Basic Statistics	June 4	May 13
Computers: A Four-Part Course in Programming	June 4	May 13

Do not detach, save format for subsequent reference.

Agencies should use their own agency letterhead for making nominations for courses using the following format, supplying all of the information requested.

NOMINATION FORM

Special Programs Department • Graduate School, USDA

1. Name..... Age.....
Title..... GS.....
(or equivalent)
Department or Agency.....
Office Mailing Address.....
Home Mailing Address.....
Office Telephone.....
(Direct Dial) (Code and Exten.)
Home Telephone.....
Social Security Number.....
2. Course (Number and Title) for which nominated
.....
3. Dates for which nominated:.....
4. Job Responsibilities (describe briefly):
.....
5. Circle highest school grade completed:
8, 9, 10, 11, 12; College: 13, 14, 15, 16
List any college degrees:.....
6. List any related courses, seminars, or programs previously completed.
.....
7. Purchase order or billing instructions:.....
8. Person to be notified concerning acceptance of this nomination:
Name..... Title.....
Office Address.....
Office Telephone.....
(Direct Dial) (Code and Exten.)
Signature and Title of the official authorizing this nomination:
.....

Send nominations to:

Special Programs Department
Graduate School, USDA
277 National Press Building
529 Fourteenth Street, N.W.
Washington, D. C. 20004

